The ILLINOIS Medical Journal

Official Journal of the Illinois State Medical Society

EDITOR — Harold M. Camp. EDITORIAL BOARD — James H. Hutton, Chairman, Frederick H. Falls, Josiah J. Moore, Edwin M. Miller, Chauncey C. Maher, Harry Culver, Walter Stevenson, Raymond W. McNealy.

Vol. 94, No. 4 October, 1948

THE GENERAL PRACTITIONER

During the year that Dr. Harrison H. Shoulders of Nashville was President of the American Medical Association, he was greatly concerned with the status of the general practitioner, and was anxious to see that every consideration possible was given to encourage younger physicians to enter general practice.

During the Atlantic City Session in 1947, Doctor Shoulders made some specific recommendations of interest to all members of the medical profession. He asked the Board of Trustees to appoint a special committee which should

(1) Define the term "general practitioner" or "general physician" on a functional basis;

(2) Determine whether or not there is need for a large increase in the number of medical graduates, and if so, its extent;

(3) Study the present program of medical education and training, both undergraduate and postgraduate, to determine whether or not the content and administration of the program is properly adjusted to the present day needs of the people;

(4) Study the possibility and feasibility of utilizing smaller community hospitals in a program for the training of general practitioners, and the possibility of approving such institutions for such training when a teaching program is properly organized and administered;

(5) Study the means by which communities in need of additional services may be aided;

(6) Study other questions as the committee itself may determine to be necessary in arriving at sound conclusions concerning the entire field of medicine.

(7) Propose a long range program designed to overcome present insufficiencies and to meet future needs.

The committee was appointed promptly, and was composed of Karl A. Meyer, chairman, Paul A. Davis, Reginald Fitz, Winfred B. Harm, Paul B. Magnuson, Walter B. Martin and Stanley R. Truman. After careful consideration of the responsibilities given to them, the committee presented its first report to the House of Delegates at the 1948 annual meeting in Chicago in June.

Its definition of a general practitioner was: "A general practitioner is a legally qualified Doctor of Medicine who does not limit his practice to a particular field of medicine or surgery". The committee thought the matter relative to the need for a large increase in the number of medical graduates was a subject which should be left to the judgment of the A.M.A. Council on Medical Education and Hospitals and the Bureau of Medical Economic Research, as this problem has been given much consideration by these departments, and a considerable amount of data has already been accumulated.

The interest of the approved medical schools in broadening the curriculum to prepare medical

students for general practice was commended by the committee. These schools are being urged to continue to place increasing interest in postgraduate training, and the committee recommends that courses of not less than two years of training be developed to enable the graduate to enter the field of general practice better prepared.

One unusually important recommendation of the committee was that every general hospital be organized to give the general practitioner adequate staff privileges and representation. This, coming at a time when too many general practitioners are denied staff privileges, or are being dismissed as staff members, is welcome news to this group.

The committee recognizes that the smaller community hospitals not directly associated with medical schools, would make excellent training institutions for general practitioners if properly supervised. The committee urges the Council on Medical Education and Hospitals to proceed with the development of such a program.

In regard to the study to aid communities in need of additional services, it was recognized by the committee that this is a function which can best be worked out at the local level. Various agencies within the A.M.A., its component state societies, as well as those of individual states and local communities, have had this matter under consideration, and it is recommended that these activities should be continued.

However, it is the opinion of the committee that more consideration should be given to the trade areas and population needs in planning additional facilities within individual communities. Financial and technical aid are necessary in many communities, and the methods of obtaining such assistance are primarily a community responsibility.

The committee believes that the hospital staff should be the sole deciding body in determining who may practice medicine in the hospital either as a member of the staff, or having hospital privileges. This conclusion resulted primarily from the fact that certifying boards pass only on the ability of a physician to perform work in his specialty.

It was the opinion of the committee that the general practitioner does not show adequate interest in organized medicine — local, state or national — and that he should be urged to participate in all the activities of organized medicine, both scientific and organizational. As for long range planning, the committee believes that would be impossible unless their committee, or another permanent committee was delegated the responsibility of making continued studies of problems as they arise in order that future needs be considered properly and recommendations made.

The committee is to be congratulated upon the fine work it has done. The report shows that the members have devoted considerable time to studying intensively many of the problems of medicine today which pertain to the general practitioner. More consideration has been given the general practitioner during the past two or three years than had been manifest during the past decade, and it is well known to all that what is needed most in the several states in general, is not more specialists, but more general practitioners.

It has been stated repeatedly that a well qualified practitioner should be able successfully and scientifically, to care for not less than 85% of the conditions encountered in his practice, while the other 15% can be referred to specialists. The terms "family physician", "general physician", and "general practitioner" are used interchangeably, yet there is some difference in these designations which we will not endeavor to discuss at this time.

Many people think kindly of the family physician who has been almost a member of the family over a long period of time. He is kind, sympathetic, and never refuses to make a hurried call whenever the family believe his services are needed. This has, in a great measure, been responsible for the classical physician-patient relationship. The present day family physician must endeavor in every way possible to keep up with the times, as he is living in the period of the greatest medical advancement in history.

In keeping with the recommendations of the A.M.A. special committee, the family physician can be a better family physician if he will attend more medical meetings, postgraduate conferences, and take an occasional refresher course for general practitioners. Likewise he will be more useful in his community if he will become interested in his local county medical society, as it is the one medical organization in the community which is looked upon by the citizenry as a whole as the medical society interested in all local affairs pertaining to health.

HOSPITAL CONSTRUCTION IN ILLINOIS DOWNSTATE AREAS

Roland R. Cross, M.D., Director, State Department of Public Health, has released his report on the financial aid which has been approved for the construction of hospitals in the downstate areas. The report shows the amount of money appropriated for grants-in-aid for local public and nonprofit hospital construction projects.

The attached schedule shows the amount of money for each project from federal, state and local sources. The location, bed capacity, estimated cost and other pertinent data likewise are shown in this schedule.

In his desire to do everything possible toward the ultimate aim of providing adequate modern hospital facilities within easy reach of all residents of the state, Doctor Cross has approved applications which conform to the legal requirements. Work has been started on some of these hospital projects, and within the next year, it is hoped that all of them will be under construction and perhaps some ready for occupancy.

With an unusually well developed system of hard roads in Illinois, and with the thousands of miles of all-weather secondary roads, there are but few, if any, communities in the state where citizens cannot reach an approved hospital within a relatively short period of time. When these hospitals which have already been approved are completed and staffed, there will be an increase of hospital bed capacity of more than 1100 beds.

Obviously this is a good start. The hospitals have been located in all sections of the state, and Doctor Cross is to be congratulated on the fine work he has done and the excellent report he has to make on these responsibilities delegated to him by Governor Green.

YOUR DUES HAVE BEEN RAISED

On May 12, 1948 the House of Delegates of the Illinois State Medical Society, in regular session, voted that the annual dues for each member of this state society should be $15.00 per annum for 1949. Of this amount, $10.00 is deposited in the general funds of the society, and $5.00 in The Benevolence Fund. This raise in dues gives the society no extra funds for general

FINANCIAL STATEMENT: HOSPITAL CONSTRUCTION PROJECTS
APPLICABLE TO 1948 AND 1949 FEDERAL AND 65TH GENERAL ASSEMBLY FUNDS ON AUGUST 23, 1948

FUNDS AVAILABLE	SOURCE OF FUNDS State	Federal	Local	TOTAL	Cost Per Bed (Approximately)
1947-48	$2,337,500.00	$2,770,725.00	(For Construc-		
1948-49	2,337,500.00	2,764,357.00	tion Period)		
Total Available	$4,675,000.00	$5,535,082.00	$5,540,654.30	$15,750,736.30	
Total Encumbrances	4,278,401.41	4,862,011.80	5,540,654.30	14,681,067.51	
Unobligated Reserve	396,598.59	673,070.20	——	1,069,668.79	

Project No.	Location	No. Beds	Type of Control					
Ill.-1	Mt. Vernon Gen.	131	NPA	388,000.00	388,000.00	388,000.00	1,164,000.00	$ 8,885.00
2	Anna	50	PUB	221,166.66	221,166.66	237,766.68	680,100.00*	13,200.00
3	Mt. Vernon T.B.	100	STATE	——	446,692.80	910,738.88	1,357,431.68*	13,400.00
4	Fairfield	100	NPA	266,667.00	333,333.00	403,000.00	1,003,000.00*	10,000.00
5	Lawrenceville	50	PUB	146,826.21	200,000.00	270,173.79	617,000.00*	12,000.00
6	Flora	50	PUB	283,267.70	283,267.70	289,267.70	855,803.10*	16,996.00
7	Aledo	50	PUB	262,560.66	262,560.66	262,560.68	787,682.00	15,753.00
8	Carthage	50	NPA	200,000.00	200,000.00	205,000.00	605,000.00*	12,000.00
9	Red Bud	64	NPA	228,879.86	226,341.00	228,879.87	684,100.73	10,564.00
10	Mt. Carmel	50	HOSP. AUTH.	249,933.33	249,933.33	274,933.34	774,800.00*	15,000.00
11	Cairo	90	NPA	500,000.00	519,616.66	539,233.34	1,558,850.00	13,245.00**
12	Metropolis	54	HOSP. AUTH.	247,500.00	247,500.00	247,500.00	742,500.00	13,750.00
13	Carmi	50	NPA	291,666.66	291,666.66	291,666.68	875,000.00	17,500.00
14	Carlinville	50	NPA	291,933.33	291,933.33	291,933.34	875,800.00	17,516.00
15	Jacksonville	140	NPA	700,000.00	700,000.00	700,000.00	2,100,000.00	15,000.00

*The total cost of projects thus marked includes the cost of certain items in which neither the State nor the Federal government participate such as cost of site, landscaping, off-site improvements, etc.

**The $13,245 per bed for Cairo is based upon $1,193,000 of the $1,558,850 which is the estimated cost of the hospital only; the remaining $365,850 is for the construction of a nurses' home.

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
Division of Hospital Construction and Services
August 24, 1948

activities; it will develop the Benevolence Fund to the place where a trust can be established, and recipients of assistance can be paid from the income.

The activities of the Illinois State Medical Society are diversified, and needless to say, extensive. The list of our committees alone is impressive: The Committee on Medical Service and Public Relations, The Committee on Medical Testimony, The Educational Committee, The Postgraduate Committee, The Committee on Medical History, The Committee on Voluntary Prepayment Plans for Medical and Surgical Care — to name only a few. And your dues to

ORGANIZATION INFORMATION
From Questionnaires Returned By
Forty-five Constituent Medical Associations

ASSOCIATION	YEAR ORGANIZED	MEMBERSHIP	1948 DUES	EMPLOYEES FULL	EMPLOYEES PART TIME
New York	1807	21,786	$15	54	6
Pennsylvania	1848	10,189	15	20	1
Illinois	1840	9,588	10	8	2
California	1856	9,009	60	9	2
Ohio	1846	7,106	15	11	0
Massachusetts	1781	6,500	25	6	2
Texas	1853	——	20	14	5
New Jersey	1766	4,958	20	9	2
Michigan	1866	4,796	12*	9	3
Indiana	1849	3,617	15	5	0
Missouri	——	3,383	8*	6	1
Minnesota	1853	3,075	20	6	0
Wisconsin	1841	2,936	35	12	0
Iowa	1850	2,377	15	5	2
Connecticut	1792	2,357	20	6	4
North Carolina	1799	2,275	10	2	1
Virginia	1820	2,108	25	2	0
Maryland	1799	2,081	10	5	2
Georgia	1849	2,063	10	1	1
Tennessee	1830	1,958	15	3	1
Washington	1873	1,953	25	3	1
Kentucky	1851	1,779	15	1	3
Louisiana	1903	1,722	25	4	0
Alabama	1847	1,656	20	0	3
Kansas	1859	1,550	15*	4	0
Colorado	1871	1,460	50	10	2
District of Columbia	1817	1,460	30	18	6
Oklahoma	1905	1,400	42	6	0
West Virginia	1867	1,391	15	3	0
Nebraska	——	1,189	15	2	3
Arkansas	1875	1,171	10	1	2
Mississippi	1895	1,000	5	0	1
Rhode Island	1812	772	40	6	0
Utah	1895	558	50	2	0
Arizona	1892	487	50	2	1
North Dakota	1887	——	35	4	1
Vermont	1813	416	35	2	0
Montana	1879	405	25	1	0
Hawaii	1856	382	15	2	1
South Dakota	1882	330	50	6	0
New Mexico	1885	300	20	0	1
Delaware	——	290	25	0	1
Wyoming	1922	196	25	0	1
Nevada	1904	164	15*	0	1
Alaska	1925	43	25	0	0

*SPECIAL ASSESSMENTS: Kansas, $35; Nevada, $50; Missouri, $7; and Michigan, $25.

the general funds of the society have not increased. The additional $5.00 will be paid in to the Benevolence Fund and eventually a trust will be developed. The general counsel of the society will make our plans, and the Finance Committee will act relative to investments.

The Benevolence Fund does not extend charity. The recipients of assistance are former members, and in the future, each physician in Illinois will feel that he has contributed to this fund, and that a minimum income will be available for himself or his widow, or his dependent children should such need arise.

On page 212, we present for consideration, the national picture as depicted in the "News Letter" from the A.M.A. Council on Medical Service dated June 21, 1948.

MEDICAL EXAMINATION PROCEDURE UNDER 1948 SELECTIVE SERVICE ACT

Col. Paul G. Armstrong
State Director, Selective Service System

At the beginning of the operation of the Selective Training and Service Act of 1940, there were appointed one or more physicians as examiners for each Selective Service Local Board.

Registrants who were found *NOT* to be deferrable in Class IV, Class III or Class II, were sent to the Local Board Physician for physical examination, so that all men who were considered for Class I-A, were examined. There was a vastly greater pool of men to be examined in the age group 21 through 35, under this policy. The age group under the Selective Service Act of 1948 that is liable for service, is 19 through 25, with approximately 50% deferred by law because of previous military service or by regulations because of marital status, leaving a comparatively small group to be considered for classification.

The physician attached to the Local Board does *NOT* make physical examinations; he interviews those registrants who have claimed disqualifying defects or diseases under Series XV of the Questionnaire; the doctor then reports his findings to the Local Board, and the Board determines whether or not the registrant will be forwarded to the Armed Forces Induction Station for physical examination.

General Bradley has estimated that 200,000 men may be needed from Selective Service during the first year of the Law's operation. Illinois' portion of that quota would be approximately 12,000 men distributed over 12 months and 217 Local Boards, or about 4 to 5 per month per board, depending on the size of the Board. With only those few who claimed defects to be interviewed by the doctor, no great burden would be placed on any member of the profession.

You are urgently requested to make yourself available to assist in this vital National Defense program.

"I WILL ACCEPT THE RESPONSIBILITY PLACED UPON ME"*

"Always, I suppose, to all persons who are so honored, the acknowledgment of an honor becomes a very difficult procedure.

I am impressed with the responsibilities which you have placed on me. Personally, I offer to the House my deepest thanks and gratitude for thus honoring me. I feel no elation. I should, I suppose, but any spark of elation is overcome by a sense of responsibility.

I have been preceded in office, for the last two or three years particularly, by men who have given yeoman service to medicine. We have before us a temporary cessation of the efforts to abridge the freedom of American medicine. We have won some preliminary skirmishes but, make no mistake, we are not through with this fight. It is a fight that is much more than the fight for the freedom of American medicine. It is a fight for the preservation of American democracy and the American way of life. We have knowledge that there are other attacks in the offing, and I know that the Board of Trustees and your other officers are taking the necessary steps to combat them.

But the battle is going to come a little later, and as the termites that have been boring from within against our democratic way of life become a little more conscious of a losing battle, we shall find that the attacks will become a little more subtle, if that could be, and a little more vigorous.

The opportunity of this House is particularly great now, for you may be able and should be able to arouse in all county medical societies a

*The text of the address of Dr. Ernest E. Irons, accepting the office of President-elect of the American Medical Association, Chicago, Ill., June 24, 1948.

will to get out and fight locally, and that has not been the case up to date. I say that not in criticism but merely as a statement of fact.

As we all go back to our daily routine, I hope that every one of us may begin, if he has not already begun, an effort to arouse the profession in the county societies and then at the state levels. If we do that, we have 130,000 doctors who can swing anything and bring the public to know the problems that they are facing and the efforts that they must make if they are to maintain their individual freedom and the American way of life.

Again, I thank you for this signal honor which I feel very deeply. I *hope* I have expressed in some small way my thanks to all of you."

FIRST NATIONAL MEDICAL PUBLIC RELATIONS CONFERENCE SCHEDULED

A national medical public relations conference, first of its kind, which will tackle six common objectives facing the medical profession today is to be held in St. Louis on November 27. Dr. George F. Lull, secretary-manager of the American Medical Association announced the meeting today which his office will sponsor.

"Shooting at Common Targets in Medical Public Relations" is the theme of the conference, to which will be invited public relations directors, executive secretaries charged with public relations duties and public relations committee chairmen from each of the forty-eight state medical societies.

Featured for luncheon and dinner talks will be noted and qualified speakers on the following topics: "The Public Speaks on Health", "What Public Relations Did for Us" and "Yes, the Profession Needs PR."

At the workshop session which will be run in the afternoon from two to five o'clock, carefully-selected discussion leaders from the state societies will grapple with these six major social issues facing the medical profession: selling the need of public relations to state medical society members, encouraging wider use of medical pre-payment plans, setting up workable systems for handling night calls, the rebate problem, developing good-will with labor, farm, industrial and co-op groups, and cooperating with health agencies.

The conference will immediately precede the annual secretaries-editors meeting, which is being held in conjunction with the annual Interim Session of the American Medical Association, November 28 to December 3.

About 100 representatives of state societies are expected to attend the sessions in St. Louis.

STATISTICIANS FIND RELATIVELY LOW MORTALITY AMONG SPECIALISTS

The mortality rate of physicians who specialize is 30 per cent lower than that of general practitioners, according to a report by Louis I. Dublin, Ph.D., and Mortimer Spiegelman which appears in the August 21 issue of the Journal of the American Medical Association.

The two statisticians are from the Metropolitan Life Insurance Company, New York City. Their report is based upon data from the American Medical Directory.

Commenting upon the lower mortality of specialists, they say that the rate "may arise from the self selection of the healthier physicians to continue their studies, from higher income levels, from more favorable conditions of work, and from better opportunities for better medical care.

"The rate of mortality from cancer among general surgeons is well below the record for any other specialty and also for nonspecialists. Their advantage in this regard may be a consequence of their training in early recognition of the condition and of their knowledge of the benefit of early treatment.

"On the other hand," they say, "roentgenologists, radiologists, and dermatologists have a high rate of mortality from cancer and leukemia, far above that for nonspecialists. This situation among these specialties suggests strongly the effect of their exposure to dangerous radiations."

MEDICAL ECONOMICS

The Medical Economics Committee. Chauncey C. Maher, Chmn., Hubert L. Allen, Emmet B. Bay, Edwin F. Baker, Carroll Birch, Thomas C. Browning, Roland R. Cross, James Graham, George Halperin, Edwin S. Hamilton, Ford K. Hick, Edwin F. Hirsch, May McDonald Milligan, Marie Wessels, Walter M. Whitaker, Holland Williamson.

The Pathologist In Group and Hospital Practice

The practice of pathology as a specialty stems from the fact that this field of specialization deals with the cause of diseases and the morphologic changes produced in the tissues. Pathology in the medical curriculum belongs with the basic sciences and because it is fundamental in medical practice the functions of the pathologist are essential in almost every field of specialized medicine. This need of the pathologist in medical practice has arisen through the development of diagnostic methods carried out entirely or in part by laboratory personnel under his supervision and through the more prevalent demand of tissue examinations which require his skill and experience for interpretation and diagnosis. Many physicians in years past chose pathology because of the satisfying interest in this field, and much of their time was spent as teachers of pathology in schools of medicine. Others, not concerned with academic interests, served as part-time pathologists to hospitals as a medium for subsistance while engaged in developing a clinical practice. With few exceptions, this plan resulted in more emphasis and time being spent in promoting the clinical practice and less effort in developing skill in pathology, if not entirely abnegating this field. Some survived as pathologists, confining their interests entirely to this specialty, improving their ability by study and experience and living to see the time when the demand by hospitals for pathologists had increased greatly, perhaps exceeded the supply, and when, because of the larger salaries offered, hospital positions are in competition with teaching appointments in medical schools.

Although any well-trained physician has the potential capacity to become a successful pathologist, those engaged in this field of specialization profit greatly from a comprehensive premedical training in biology and chemistry, subjects which emphasize technic, observation, understanding and correlation of biological data. Admission to the examinations for certification in Pathology is granted by the Board of Examiners after three years of specialized training under an accredited pathologist and a year of practice in the specialty. Thus equipped to direct a laboratory, the pathologist integrates the services of his specialty with those of other specialists or general practioners with whom he is associated. Here are tested his

professional qualifications, personal characteristics and ability to work in groups. On his part he becomes acquainted with similar qualities of his associates and doubtless has learned some of the requirements of these relationships during his training program. Tactfulness, honesty, tolerance in personal difference, and frankness in discussions are among the elements necessary for effective team work in such group relations. Perhaps the greatest stress occurs in matters involving honesty and fair dealings.

Because the pathologist can demonstrate specific and characteristic lesions in many of the tissues submitted for examination, precision in diagnosis in his field can approach a high level and at a plane of accuracy admittedly above that obtainable by physical examination. This comment does not intend to arouse an argument on the advantages in either field of specialization, but simply frames the relative position of each of the specialties in this respect. It gives neither to the pathologist the right of judgment over the clinician, or to the clinician the attitude of belittlement of the pathologist when a disease is disclosed in tissues which the clinician had not suspected. Discussion by all concerned of the evidence disclosed by the tissue examination is the proper approach. This attitude is especially important in necropsies. These examinations serve their highest function when the pathologist and the clinician work together, the pathologist serving as a demonstrator for the clinician rather than a ruthless judge. This does not mean any timidity about disclosing faulty practice of treatment and therapy, because the necropsy is a searching experience for all. Respect for the pathologist grows with his skill in making the postmortem examinations and his ability to correlate for the clinician the symptoms of his patient with the conditions disclosed in the tissues. No pathologist in serving his function as impartial arbitrator escapes the experience of sharing a necropsy with a clinician where pathological changes were encountered which in retrospect established faulty diagnosis or treatment. This is a real test of the quality of a physician's character. Can he accept a hard lesson with equanimity and determination to profit; or does he stubbornly resolve not to expose himself to a similar experience. The frankness with which clinicians discuss the results of these postmortem examinations reveals an honesty and sincerity of purpose which dispels any suspicion of fear about the disclosures of the postmortem examination. The more recent graduates of medical schools and those having finished residency appointments have been exposed to this form of medical education and postgraduate teaching.

The supervision of the clinical laboratory services is a responsibility of the pathologist. In these functions he wins the confidence of his associates through developing a high quality of service in the various departments, being alert to new methods or revisions of examinations, and expediting procedures so that the results are reported promptly. Nearly all large and many small hospitals have installed blood bank facilities. These usually are given to the pathologist for organization and development. Clinical pathological conferences and other educational facilities for the medical staff are important adjuncts in hospital activities. The pathologist has much responsibility in the programs of these conferences. His ability to present and discuss the lesions in the autopsy or surgical material determine in a large measure the interest and attendance of these meetings. The value of visual education has been demonstrated in many fields of study. At conferences for large groups, various projectors such as for opaque objects, slide preparations of tissues, and lantern slides in black and white and Kodachrome greatly facilitate the exposition of the subject material. The pathologist should be provided with equipment for these purposes. Where circumstances permit, Kodrachrome photography (lantern slides) add much to the expositions. These become available later for use by the pathologist and staff physicians. Kodachrome slides obtained in this way gradually assemble into valuable collections for teaching purposes.

The pathologist, thus, can render signficant service in his specialty in group and hospital practice and also may contribute much to stimulating the educational activities of the medical staff. He should be recognized at the same levels of staff appointment as the other specialists, and neither he nor the laboratory organization under his direction should be exploited financially.—E. F. H.

MEDICO-LEGAL BRIEFS

Possible Liability in Operations To Produce Sterility

Although the law is now well settled in many jurisdictions that therapeutic abortion may legally be performed in a proper case, the status of operations to produce sterility is by no means clear or settled. The question of possible civil or criminal liability in such matters is apparently increasing in importance to physicians and hospitals alike.

While numerous states have adopted widely dissimilar sterilization statutes, many of the larger states, Illinois among them, have thus far refrained from legislating on the subject. Those states which have prohibited or restricted the performance of operations to produce sterility have, for the most part, done so upon the theory that such operations are, except in certain instances, contrary to public policy. Whether the courts of Illinois would so hold is still a matter of conjecture, since the question has not been adjudicated. We can, however, in the light of the history and trend of the lawmaking, legislative and judicial, on the subject, make some reasonably enlightened guesses as to what our courts would probably hold.

The question of liability divides itself into two parts: (a) does the performance of such an operation constitute a violation of criminal law; and (b) is such an operation a tort giving the patient or his family a right to recover damages from the physician or hospital?

On the question of criminal responsibility, it seems entirely safe to assume that surgery to produce sterility for sound reasons of health would not now be considered a crime. Illinois has no statute expressly rendering such an operation illegal, and there seems to be no reason to assume that our courts would hold the same to be violative of any existing criminal statute, or criminal apart from the statute law. This is probably true whether the particular operation were therapeutic, eugenic or contraceptive, although it is at least conceivable that a court might deem a contraceptive sterilization contrary to public policy and the other types not.

The problem of civil liability for damages can be amply dealt with by the taking of proper consents from the necessary persons prior to the operation. In order that physician and hospital

may be adequately protected, it is extremely important that consents should be sufficiently broad and detailed, and that all necessary persons be required to sign them. In general, it would be wise to take the same precautions as are routinely taken prior to the perfomance of therapeutic abortion. Every effort should be made to ascertain whether the patient is married, even though the patient may profess to be single. The non-consenting spouse of a person sterilized would unquestionably have a cause of action unless all reasonable effort had failed to disclose the patient to be married. Should there be any doubt that an unmarried patient is of legal age, good practice would require that his or her parents join in the consent.

The consent form itself should be detailed and explicit. It should specify the exact type of surgery to be performed, and should also set forth — for the information of the persons signing the consent — the material medical findings rendering the operation necessary. It would also be wise to include a statement, where appropiate, that the results of the operation are not guaranteed. In at least one case, a physician was sued, though unsuccessfully, on the theory of a breach of warranty where a pregnancy occurred after such an operation. It would also be wise to have consultation in all such cases, to bolster the judgment of the attending physician as to the need for or advisability of such an operation.

In summary: On the basis of present authorities, it seems safe for physicians and hospitals to assume that a sterilization operation predicated upon reasonable medical grounds is not an unlawful act in Illinois. While the same might ultimately prove to be the case as to contraceptive sterilizations, there is no logical basis for so assuming at the present time. The other phase of the problem — that of civil liability — can be satisfactorily provided for by the taking of proper consents.

PROPHET WITHOUT HONOR UNLESS A BANDIT

An announcement that a couple of top-flight movie stars expect to pay a Hollywood physician $20,000 for delivering their baby got quite a play in the newspapers recently and provoked the usual smart-alec editorials in some sheets about doctors' charges, ethics, and the like. Imagine weeping over anything that happens in Hollywood!

About the same time we came across a brief paragraph on the back page of a certain small Ohio newspaper announcing that some new rates had been agreed upon by the doctors of the county—a really rural community. Here they are: Office call, $2.00; house call, $3.00; long-distance house call, $3.00 plus 50 cents per mile one way; normal o. b., $50.00; premarital examination and certificate, $10.00; X-ray, fractures, dislocations, per Industrial Commission schedule. Imagine in 1948 A. D.!

That announcement didn't get much publicity. Obviously, it wasn't dignified by an editorial. Too bad!

Nobody gives a hang how often the editorial writers and columnists tee off on the physician who gouges patients, although he's probably beyond saving. But, it would be comforting to see more nice words written about some of the mighty nice things so many physicians do all the time for their patients and the community, so the folks will realize that in the end only a few members of the medical profession can trace their ancestry back to Jesse James.

The Ohio State Medical Journal, Sept. 1948.

STATE DEPARTMENT OF PUBLIC HEALTH

The Course of the Maternal Death Rate In Illinois

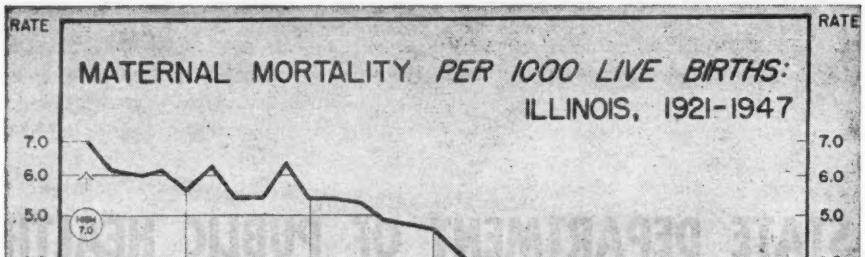
The highest birth rate and, at the same time, the lowest maternal death rate in the history of Illinois occurred in 1947. There were 192,248 live births, a rate of 23.4 per 1,000 population. Ninety-four per cent of the live births (180,364) occurred in hospitals. During 1947 there was a total of 200 maternal deaths, a rate of 1.04 per 1,000 live births. In the group of hospital confinements, there were 176 maternal deaths, a rate of 0.98 per 1,000 live births. The non-hospital confinements totaled 11,884, with 24 maternal deaths, for a rate of 2.02 per 1,000 live births.

The graph illustrates the decline of maternal deaths in Illinois during the 27 year period, 1921-1947. These data are presented in arith-log form in order to portray not only the numerical decrease in rate, but also the relative change from year to year. Equal vertical distances represent equal percentage change in the rate. From the graph, one can read that the maternal mortality rate in 1921 was 7 per 1,000 live births. Had circumstances then existing continued to prevail in 1947, there would have been 1,346 maternal deaths last year, instead of the 200 which were recorded. The saving of these 1,146 lives, and the decrease in the risk of death associated with gestation, is a remarkable attainment which, no doubt, seemed an impracticable goal 27 years ago. From the graph it is apparent that the rate has been cut in half since 1943 and that most of this drop occurred in the period 1945-1947.

Whether or not a similar per cent decline can be expected to occur in the next two-to-five year period depends on:

1. Continuance of the forces which have figured in the prevention of deaths, and
2. Removal of the factors which continue to cause maternal deaths.

Before it can be decided whether or not the favorable forces are likely to continue to operate as they have in the past, it is essential to determine the nature of these forces. Since many of them are broad phenomena and none has been subject to controlled experiment, attempts to define them are likely to be incomplete and subject to bias. But, from a physician's point of view,



certain to be included among the forces which prevent maternal deaths are improved socio-economic circumstances of the people, increased literacy, augmented public health education, improved medical education, the use of blood-products and the newer antibiotics, better distribution of health service personnel, greatly increased use of hospitals for obstetric care and the improvement in hospital facilities and maternity routines. If these be the important factors, we may expect most of them to continue in their influence. Chances are that better distribution of hospitals, brought about through the Hospital Survey and Construction Act will bring improved facilities and more opportunities for health service and health education than existed heretofore in many sections of Illinois. The increase in local health units promises larger staffs of public health nurses to find the early prenatal cases and to encourage them in good maternal hygiene and the carrying out of physicians' orders. Perhaps it is too much to expect that there will be a new set of miracle-drugs, but there are likely to be consolidated gains in the application of available knowledge of biologics, nutrition, and clinical technics.

With regard to the second aspect of the problem — that of the factors which continue to be the cause of maternal deaths — the State Department of Public Health is gratified to report that a concerted effort is under way. Under the joint auspices of this Department and the Maternal Welfare Committee of the Illinois State Medical Society, a study of maternal deaths began in January 1948. The study involves analysis of maternal deaths which occur in hospitals of the State, excluding the City of Chicago, where such analysis has been going on since 1938. The investigation is made by the State Health Department. The physician assigned to the project is a Consultant in Maternity of the Division of Maternal and Child Health. The Department is very fortunate in having as the Consultant to inaugurate this program, Charles Newberger, M.D., a physician with many years of practice, most of which were limited to ob-

stetrics, with 32 years teaching in the Department of Obstetrics at the University of Illinois College of Medicine, and with specialist certification by the American Board of Obstetrics and Gynecology. The investigation starts with the reporting of the death by the hospital administrator. Then a visit is made to the hospital for thorough study of the patient's record, and for interviews with the attending physician, superintendent, obstetric supervisor, record librarian, or other personnel who can contribute to the total body of information concerning the case. A written report of the data so obtained is prepared under a maternal-death-study case number, without mention of the name of the patient, physician or hospital involved. Copies of this report are mimeographed and sent to each member of the Maternal Welfare Committee. The Committee confers periodically to discuss the case reports, determine preventability, and assign responsibility.

In the first six months of 1948, there have been studies of 43 deaths associated with gestation. These called for visits to 39 hospitals in 27 counties, and interviews with 134 individuals, of whom 48 were physicians. Of the 43 deaths, 36 were classified as maternal in origin, and 7 as non-maternal. The assigned causes in the 36 obstetric deaths were as follows:

Hemorrhage	17
antepartum	5
intrapartum	1
postpartum	4
due to abortion	1
due to ectopic	6
Toxemia	6
eclampsia	5
nephritis	1
Infection	6
puerperal	2
septic abortion	4
Embolism	3
all followed operative procedures; 2 after cesarean section, and 1 for a wrongly diagnosed ectopic pregnancy.	
Ileus (after a cesarean section)	1
Aspiration pneumonia	1
Puerperal psychosis	1
Acute heart failure (?)	1

The assigned primary cause of death in the seven non-obstetric cases were as follows:

Rheumatic heart disease	2
Diabetic coma	1
Encephalitis	1
Tuberculosis meningitis	1
Ruptured duodenal ulcer	1
Sepsis (following perforation of the uterus in an attempt at self-induced abortion, in a patient who in error believed herself pregnant.)	1

Twenty-three mothers were delivered before death occurred. The nature of the deliveries was as follows:

Spontaneous deliveries	9
Operative deliveries	14
cesarean section	6
forceps	5
low	3
mid	1
high	1
breech extraction	1
version and extraction	1
ovum forceps	1

To these 23 mothers, 25 infants were born: 23 infants to mothers who died after delivery, and twins by postmortem section in an eclamptic patient. Of these 25 infants, 16 were born alive, and 9 were stillborn. Of the 16 living infants, 2 died: one previable premature who lived 5 minutes and one premature who lived 20 hours.

In addition to deaths from abortions, ectopic pregnancy, and perforation of a hollow viscus following attempts at abortion when no pregnancy existed, there were 9 mothers who died undelivered: four from eclampsia, two from heart conditions, and one each from embolism, diabetic coma, and tuberculous meningitis.

In the course of the study, considerable additional material has been gathered, all of informative character, and of potential educational value, dealing with marital status, race, age, gravidity, and months of gestation, type of community of patient's residence, the completeness of facilities in the hospital where death occurred, medical records, and autopsies. In the instances of the seven deaths which upon study were determined as non-maternal, the investigation has been responsible for changes in the official coding of cause of death in the State and National Vital Statistics Offices. This kind of change will in

TABLE 1
MATERNAL DEATH RATES BY REGION:
ILLINOIS 1947

Region	Number of Live Births	Maternal Deaths	
		Number	Rate Per 1000 Live Births
Illinois Total	192,248	200	1.04
Region 1—Chicago Metropolitan Area Cook, DuPage, Kane, Lake, Will	114,011	101	0.89
Region 2—Northern Area Boone, Bureau, Carroll, DeKalb, Grundy, Henry, JoDaviess, Kankakee, Kendall, LaSalle, Lee, McHenry, Ogle, Putnam, Rock Island, Stephenson, Whiteside, Winnebago	19,940	20	1.00
Region 3—Peoria Metropolitan Area Peoria, Tazewell	6,226	7	1.12
Region 4—Central Area Adams, Brown, Calhoun, Cass, Champaign, Christian, Clark, Coles, Cumberland, DeWitt, Douglas, Edgar, Ford, Fulton, Greene, Hancock, Henderson, Iroquois, Jersey, Knox, Livingston, Logan, McDonough, McLean, Macon, Macoupin, Marshall, Mason, Menard, Mercer, Montgomery, Morgan, Moultrie, Piatt, Pike, Sangamon, Schuyler, Scott, Shelby, Stark, Vermilion, Warren, Woodford	28,993	28	0.97
Region 5—East St. Louis Metropolitan Area Madison, St. Clair	8,680	12	1.38
Region 6—Southern Area Alexander, Bond, Clay, Clinton, Crawford, Edwards, Effingham, Fayette, Franklin, Gallatin, Hamilton, Hardin, Jackson, Jasper, Jefferson, Johnson, Lawrence, Marion, Massac, Monroe, Perry, Pope, Pulaski, Randolph, Richland, Saline, Union, Wabash, Washington, Wayne, White, Williamson	14,398	32	2.22

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
Division of Hospital Construction and Services
August 9, 1948

TABLE 2
MATERNAL DEATH RATES BASED ON 1000 LIVE BIRTHS IN SELECTED HOSPITALS BY REGION, 5 YEAR EXPERIENCE: ILLINOIS 1943 THRU 1947

Selected Hospitals by Region	Live Births	Maternal Deaths	
		Number	Rate Per 1000 Live Births
Region 1—Chicago Metropolitan Area			
Hospital A	18,341	5	0.27
Hospital B	10,624	10	0.94
Hospital C	7,067	13	1.84
Hospital D	6,615	1	0.15
Hospital E	8,786	11	1.25
Hospital F	6,929	2	0.29
Hospital G	13,748	18	1.31
Region 3—Peoria Metropolitan Area			
Hospital H	10,863	12	1.10
Region 5—East St. Louis Metropolitan Area			
Hospital I	5,080	10	1.97
Total all 6 Regions, all Hospitals	721,231	1106	1.53

ILLINOIS DEPARTMENT OF PUBLIC HEALTH
Division of Hospital Construction and Services
August 13, 1948

itself have the effect of lowering the maternal death rate for the year 1948, provided that the other circumstances remain relatively constant.

The Maternal Welfare Committee, in their review of the data, has passed judgment on the preventability and responsibility for these losses, as is the custom in such reviews in Chicago, Philadelphia, Baltimore, New York and the several states where such investigations are currently being made. The plan is to have all this information, as well as abstracts of the more instructive cases, available for presentation before medical groups in the State, and for publication in the Journal.

The State Health Department expects, however, that the fruits of the maternal death study will go beyond the publication of scientific treatises and the presentation of talks to special medical groups. The Department believes that there might be revealed sufficient common denominators still operating to the detriment of our mothers that periodic generalizations can be formulated and can be presented to the medical, hospital administrative, and lay public in order to stimulate corrective measures. At the present early period of the study, review of the breakdown on the 36 maternal deaths referred to above, discloses that 17, or 47 per cent, were attributed to hemorrhage. How many of these cases of hemorrhage are due to conditions which through individual or group action can be ameliorated? Did these deaths occur under circumstances where a more adequate supply of blood and blood derivatives could have sustained the patient until the hemorrhage was stopped? Why, in these times, need a State like Illinois experience five deaths attributed to eclampsia? Is our pattern of prenatal care and education in the hygiene of pregnancy all that it should be? We expect that answers to questions like the above will, in time, come out of this study and that a practicable course of action will be brought to sharp focus.

That the State has not reached an irreducible minimum of maternal deaths is evident from study of Tables 1 and 2 which show the variation in experience in selected regions and selected hospitals of the State. Some of the differences in maternal death rates portrayed in these two tables are within the limits of chance variation, but others are sufficiently striking to encourage and justify painstaking search for the truths that underlie these variations in experience in our State.

NEW FORM OF PENICILLIN EFFECTIVE FOR 24 HOURS

CHICAGO — A comparatively new form of penicillin, "intracillin," produces "an effective blood penicillin level" for 16 to 24 hours, according to five researchers from the Division of Pharmacology and Chemotherapy, Warner Institute for Therapeutic Research, and the Medical Department, William R. Warner & Co., Inc., New York City.

Writing in the September 11 issue of The Journal of the American Medical Association, the researchers — N. Ercoli, M.D.; W. C. Hueper, M.D.; L. Landis, M.S.; B. S. Schwartz, M.A.; and F. J. Queally, M.D., say that intracillin is a preparation of potassium penicillin, oil, and adrenalin.

Tests on 25 volunteers show that no significant increase in blood pressure can be attributed to intracillan. Blood pressures were taken at intervals up to 21 hours after intracillin was injected. The preparation can be given with ordinary syringes and needles.

Clinical study has confirmed the therapeutic value of this type of penicillin. In studies made at the New York City Department of Health, a single injection of intracillin cured 97 out of 100 male patients with gonorrhea. The three patients who did not respond to the first injection, were promptly cured with a second injection, the article says.

CORRESPONDENCE

ORGANIZATION OF AUXILIARIES IN ILLINOIS

Each County branch of the Illinois Medical Society has the privilege of having an auxiliary composed of wives of members of the State Society. We, as members of the Woman's Auxiliary to the Illinois State Medical Society, hope during the year to make eligible women cognizant of their opportunity to join with us in promoting the aims and ideals of our great organization. We feel that with the help of members of the Illinois Medical Society in familiarizing their wives with the work and purpose of the Auxiliary that we will make progress; eventually having an auxiliary organized in every county in our state where one is feasible.

At the present time our nearly 1300 members are represented in twenty county organizations and in thirteen other counties that have members-at-large. Last year while no new counties were organized we gained 206 new members throughout the State. The number of members-at-large is steadily increasing which is one of our strongest links. A chairman of the members-at-large keeps them informed of all important auxiliary matters.

There are ninety County Medical Societies in Illinois, so our Auxiliary Organization work is only one-third done. The reassuring angle is that though we move slowly we always more forward.

The organization committee is composed of the councilors from the thirteen districts of the State Auxiliary. Each councilor works in her district to further the interests of the Auxiliary. Now let every member do her part, too, in making this another year of growth for our very worth while organization for doctors' wives only.

Mrs. E. M. Egan,
Organization Chairman

ILLINOIS NATIONAL GUARD MEDICAL DEPARTMENT LETTER

The new National Guard is more than a hobby with pay; it penetrates into the very hearts of the thousands of interested persons who make up its various units. This was thoroughly demonstrated during this past month when eight Medical and three Dental Officers adequately handled the medical needs of some 6,000 National Guard troops of the 44th Infantry Division and attached troops in the hot and dusty fields of Camp Ellis, Illinois. These Medical and Dental Officers went about the business of sick call, sanitary inspections, evacuation of patients and administrative details with such vigorous energy that no epidemics of diarrhea or contagious diseases took place and only a few medical and surgical cases had to be evacuated to a nearby hospital. The same feat was repeated in the

various other summer encampments of the National Guard. Shouldering a tremendous responsibility, National Guard physicians and dentists throughout the state spent a vacation with pay, working like troopers and having a wonderful time doing so.

National Guard weekly drill pay consists of 1/30th of a months basic pay including longevity credit. A Captain would draw, for one two-hour weekly drill period $7.67, plus what longevity pay he has accrued. Summer camp pay consists of regular basic pay, plus longevity and each officer receives subsistance and rental allowance according to the rank held by the individual.

Physicians and dentists up to the age of 26, who were members of the Guard prior to the enactment of the present peace time Selective Service Act are exempt from the draft. This same advantage applies to all enlisted men of draft age who were Guard members before the President signed the law. Thus, many young doctors are able to continue in the medical practice or take special training along with their army duty in the Guard. Many medical and dental students are therefore allowed to pursue the same course of instruction without interruption for service under the present draft bill.

National Guard Medical Officers can serve one grade higher than the grade set up by the table of organization. Thus, a doctor, separated from the service as a Lieutenant Colonel, can serve in grade as a regimental surgeon, which normally calls for the rank of Major. In the same manner Majors can serve in the positions calling for Captains without taking the reduction in grade.

Nondisability Retirement is available to members of all Civilian Components of the Armed Forces. The National Guard training schedule allows each member to accumulate enough points per year to qualify for this retirement. It is next to impossible in certain reserve components to earn enough points according to the present schedule, to benefit by the provisions of the Retirement Act. Following is a summary of the law as pertains to the above-mentioned point system for nondisability retirement.

1. Retirement pay granted at the age of sixty.

2. Retirement pay granted to any member of the various civilian components of the Army, Air Force, Navy, Marine Corps, who has served twenty or more years in any or all of the above services.

3. Each member must complete a year of satisfactory Federal Service for each year of pay.

4. A year of satisfactory Federal Service is a year wherein a person is credited with a minimum of fifty points.

5. One point is credited for each day of active Federal Service.

6. One point is credited for each drill period or periods of equivalent instruction.

7. Fifteen points are credited for membership in any reserve component for each year of Federal Service other than active federal duty.

8. No person can accumulate more than sixty points a year earned under the provisions of paragraph 6, and 7, above.

9. Each year of service, as a member of a reserve component prior to the enactment of the law shall be deemed to have completed a year of satisfactory Federal Service.

10. Retired pay is paid at an annual rate equal to 2½% of the active duty annual base and longevity pay.

11. Retired pay is based on a year of three hundred and sixty days.

12. Retired pay is paid on the basis of the highest rank held in the entire span of service of the person concerned.

13. No one may receive retired pay to exceed 75% of the normal active duty pay for the grade concerned.

14. A National Guardsman earns at least seventy-five points each year during regular drill and summer field training and does so in the following manner: Forty-eight drill periods equal forty-eight points. Membership in the Guard equals fifteen points making a total of sixty-three points, however, he can use only sixty of these points because summer camp in an active duty capacity adds fifteen more points to the above total, making a grand total of seventy-five points thus meeting the requirements set forth in the law.

15. In the Officers Reserve Corps, unless the person is a member of a class A unit there is not enough regular drill instruction or camp periods to allow an annual accumulation of the required fifty points.

The average Officers Reserve Corps member earns a total of twenty-seven points in a year of normal instruction, i.e., twelve points are earned from the monthly instructional periods and the additional fifteen points are gained from being a member of the civilian component. In order to earn the additional twenty-three points during the year the member will have to go on a tour of active duty for more than three weeks each year.

Membership in the New National Guard therefore provides a retirement pay of about $100.00 a month for rank of Colonel, compared to a civilian

insurance policy of $15,000, or an income of $18,000 in the span of fifteen years after retirement if the person lives to be seventy-five years of age. Thus the National Guard affords Medical and Dental Officers excellent advantages from the standpoint of national and professional security.

The Committee: Lt. Col. Arthur E. Diggs, Lt. Col. John R. Tambone, Lt. Col. E. W. Telford, Lt. Col. Ivar E. Dolph, Major Frank Lock.

PAYMENT UNDER THE EMIC PROGRAM

To the Editor:

The U. S. Children's Bureau has again pointed out that funds for payment of maternity care under the EMIC Program are available only for care provided to eligible women where

a) such care was provided (by the physician, nurse or hospital) before June 1, 1948 and
b) the authorization for the provision of such care was issued before July 1, 1948.

Care during the first year of life for eligible infants must be completed before April 20 of next year, 1949 and must be authorized before May 20, 1949.

It is important that outstanding maternity bills be submitted before December 1, 1948 for payment through the Division of Maternal and Child Health, Illinois Department of Public Health.

Very truly yours
Donaldson F. Rawlings, M. D., Chief
Division of Maternal and Child Health

PRIZES FOR RESEARCH IN UROLOGY

The American Urological Association offers an annual award of $1000.00 (first prize of $500.00, second prize $300.00 and third prize $200.00) for essays on the result of some clinical or laboratory research in urology. Competition shall be limited to urologists who have been in such specific practice for not more than five years and to residents in urology in recognized hospitals.

The first prize essay will appear on the program of the forthcoming meeting of the American Urological Association, to be held at the Biltmore Hotel in Los Angeles, May 16-19, 1949.

For full particulars write the Secretary, Dr. Thomas D. Moore, 899 Madison Avenue, Memphis 3, Tennessee. Essays must be in his hands before February 15, 1949.

ANNOUNCEMENT OF VAN METER PRIZE AWARD

The American Goiter Association again offers the Van Meter Prize Award of Three Hundred Dollars and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The Award will be made at the annual meeting of the Association which will be held in Madison, Wisconsin, May 26th, 27th, and 28th, 1949, providing essays of sufficient merit are presented in competition.

The competing essays may cover either clinical or research investigations; should not exceed three thousand words in length; must be presented in English; and a typewritten double spaced copy sent to the Corresponding Secretary, Dr. T. C. Davison, 207 Doctors Building, Atlanta 3, Georgia, not later than March 15th, 1949. The committee, who will review the manuscripts, is composed of men well qualified to judge the merits of the competing essays.

A place will be reserved on the program of the annual meeting for presentation of the Prize Award Essay by the author if it is possible for him to attend. The essay will be published in the annual Proceedings of the Association. This will not prevent its further publication, however, in any Journal selected by the author.

TESTS FOR OPHTHALMOLOGISTS

Candidates for the certificate of the American Board of Ophthalmology are accepted for examination on the evidence of a Written Qualifying Test. These Tests are held annually in various parts of the United States.

Registration is already closed for the next Test to be given in January 1949.

Applications are now being accepted for the 1950 Written Test. They will be considered in order of receipt until the quota is filled.

PRACTICAL EXAMINATIONS FOR ACCEPTABLE CANDIDATES 1949

San Francisco	March 21-24
New York	June 11-15
St. Louis	October 15-19
Boston	December

ORIGINAL ARTICLES

Treatment of Influenzal Meningitis

Abraham Levinson, M.D.
Chicago

Influenzal meningitis, even more so than other types of bacterial meningitis, reflects the rapid progress medicine has made during the past few years. In a comparatively short period, the treatment of this type of meningitis has changed several times. In order to evaluate the various methods of treatment of this disease, we are presenting a study of 60 cases of influenzal meningitis treated by us at the Children's Division of the Cook County Hospital from January 1942 to June 1948, with a comparison of the results of each type of treatment. Our study also threw light on the question whether intrathecal therapy is necessary in the treatment of meningitis.

TYPE OF TREATMENT

Our cases are divided into two main groups:

1. Those treated without strepomycin.
2. Those treated with streptomycin.

From the Children's Division of the Cook County Hospital and from the Hektoen Institute for Medical Research.

A review of the tables shows our results according to the two types of treatment. the cases treated with sulfa, penicillin and serum without streptomycin had a mortality of 48.5%, and those with streptomycin had a general mortality of 9.8%.

The cases treated without streptomycin are further broken down to the following subdivisions:

Sulfonamides alone, 6 cases, 6 deaths - 100% mortality.

Sulfonamides and Alexander Serum, 12 cases, 6 deaths - 50% mortality.

Sulfonamides, penicillin and Alexander Serum, 9 cases, 1 death - 11.9% mortality.

Sulfonamides and penicillin, 2 cases, 1 death-50% mortality. (Table 1)

The mortality in our cases of influenzal meningitis treated by streptomycin is as follows:

Of the 12 cases treated by streptomycin, sulfa, pencillin and serum 3 died, a mortality of 25% (Table 2). All of the 17 cases that were treated by streptomycin and sulfa recovered (Table 3 A

TABLE 1

RESULTS OF TREATMENT OF INFLUENZAL MENINGITIS WITHOUT STREPTOMYCIN

	Name	Age	TREATMENT Sulfonamide	Alexander Serum (in mg.)	Penicillin	Results
1.	D. K.	13 mo.	Diazene			D
2.	S. K.	23 mo.	Diazene			D
3.	C. J. H.	6 mo.	Pyridine			D
4.	T. N.	3 mo.	Merazine, Diazine			D
5.	R. A.	11 mo.	Thiazole			D
6.	M. C.	18 mo.	Thiazole			D
7.	R. S.	7 mo.	Diazene	50		D
8.	C. C.	2 mo.	Diazene, Pyridine	50		R
9.	B. N.	6 mo.	Pyridine	50		D
10.	R. M.	2 yrs.	Diazene	75		R
11.	J. P.	10 mo.	Diazene	50		D
12.	P. S.	8 mo.	Pyridine	150		D
13.	S. A.	18 mo.	Diazene	100		R
14.	M. J. B.	21 mo.	Diazene	150		D
15.	J. K.	11 mo.	Merazine, Diazene	50		D
16.	L. B.	7 mo.	Diazene	100		R
17.	R. D.	24 mo.	Diazene	50		R
18.	J. C.	23 mo.	Diazene	75		R
19.	D. S.	14 mo.	Diazene	50	X	R
20.	D. S.	3 mo.	Diazene		X	R
21.	D. V.	3 mo.	Thiazole		X	D
22.	R. B.	18 mo.	Diazene	50	X	R
23.	L. G.	12 mo.	Diazene	50	X	R
24.	A. W.	4 mo.	Diazene	25	X	R
25.	N. M.	5 mo.	Diazene	50	X	R
26.	R. C.	12 mo.	Diazene	50	X	D
27.	J. G.	8 mo.	Diazene	100	X	R
28.	J. M.	16 mo.	Diazene	50	X	R
29.	F. B.	7 mo.	Diazene	150	X	R

TABLE 2

Influenzal Meningitis Treated with Streptomycin, Sulfa, Penicillin and Serum

Name	Age	Streptomycin I. M. 100,000 U. every 3 hours	Streptomycin I. T. 100,000 U. daily	Sulfa-diazene	Penicillin	Alexander Serum	Results
1. M. W.	6 mo.	X		X	X		R
2. M. D.	10 mo.	X		X	X		R
3. D. E.	2 yr.	X	X	X	X	X	R
4. R. D.	9 mo.	X	X	X	X	X	R
5. H. A.	18 mo.	X	X	X	X	X	R
6. S. P.	11 mo.	X	X	X	X	X	R*
7. C. H.	5 mo.	X	X	X	X	X	D
8. S. A.	7 mo.	X	X	X	X	X	D
9. D. S.	20 mo.	X	X	X	X		R
10. J. T.	8 mo.	X		X	X	X	R
11. J. C.	2 yr.	X		X	X	X	R
12. M. G.	3 mo.	X		X	X	X	D

* with post encephalitic sequellae

TABLE 3A

Influenzal Meningitis Treated with Streptomycin, 100,000 Units Every 3 Hours, (Intramuscularly Only) and Sulfadiazine

	Name	Age	Strepto-mycin - I.M.	Sulfa-diazine	Results
1.	D. W.	10 mo.	100,000 units every 3 hours	X	R
2.	W. C.	6 mo.	X	X	R
3.	S. S.	5 yr.	X	X	R
4.	J. G.	4 mo.	X	X	R
5.	A. L. M.	5 wks.	X	X	R
6.	S. S.	5 mo.	X	X	R
7.	J. D.	10 mo.	X	X	R
8.	C. J.	14 mo.	X	X	R
9.	P. H.	6 mo.	X	X	R
10.	F. H.	10 mo.	X	X	R
11.	A. J.	2 yrs.	X	X	R

TABLE 3B

Influenzal Meningitis Treated with Streptomycin, 300,000 Units Every 6 Hours (Intramuscularly Only) and Sulfadiazine

	Name	Age	Strepto-mycin-I.M.	Sulfa-diazine	Results
12.	J. A.	4 yrs.	300,000 Units every 6 hours	X	R
13.	B. W.	5 mo.	X	X	R
14.	D. C.	14 mo.	X	X	R
15.	C. P.	13 mo.	X	X	R
16.	A. H.	12 mo.	X	X	R
17.	H. C.	4 yr.	X	X	R

and B). 2 cases have been treated with streptomycin only, and both recovered (Table 4).

In spite of the two recoveries on streptomycin alone, we continue to combine sulfadiazine with streptomycin in order to treat secondary invaders, which are not uncommon in influenzal meningitis.

ROUTE OF ADMINISTRATION

Originally, we gave streptomycin both intramuscularly and intrathecally. In the last series of 22 cases, however, all the streptomycin was given only intramuscularly. In spite of the intrathecal therapy some of the patients died. In the last series there were no deaths, demonstrating that no intrathecal therapy is necessary. This was found to be the case also in tuberculous meningitis (to be published), in which the cases that improved had no intrathecal streptomycin. This confirms the original work of Hayne.

DOSAGE

The dosage of streptomycin we employed originally in the treatment of influenzal meningitis was 100,000 units intramuscularly every 3 hours. In the last 6 cases we administered 300,000 units intramuscularly every 6 hours and the patient recovered. We therefore believe that 300,000 units of streptomycin every 6 hours is the proper method of treatment.

LENGTH OF TREATMENT

We have been feeling our way as to the length of time streptomycin treatment is to be continued. Early, we gave streptomycin for 14 days, then we reduced it to 8 days and now we continue it until the patient stays afebrile for 3 days. The average length of streptomycin treatment in the last series has been 7 days.

As to sulfonamides, we use sulfadiazine and give it intravenously to begin with, with an average of 3 grains of sodium sulfadiazine per pound of body weight in 24 hours. Gradually, we reduce the sulfadiazine to 1 grain per pound and as soon as possible we administer it by mouth. We continue the sulfadiazine for 5 days after the streptomycin is discontinued.

Next to treatment, the following data has been interesting.

ETIOLGY

Incidence. — Influenzal meningitis ranked third in frequency of the cases of meningitis treated at our hospital, meningococcic meningitis being first and tuberculous meningitis second in frequency. Influenzal meningitis accounted for slightly less than 20% of our meningitides.

Bacteriology. — Practically all cases of influenzal meningitis are caused by type B of Hemophilus Influenzae bacillus. In the majority of our cases the organism quelled with the Alexander Serum.

Predisposing Causes. — Sinusitis is the most important predisposing factor in influenzal meningitis. Pneumonia and otitis media are also important predisposing factors.

Season. — Fall and winter with their inclement weather, predispose to this type of meningitis. Cases, however, do occur any time of the year.

Sex plays no role.

Age. — Our youngest patient was 5 weeks old and our oldest 5 years. The largest number of

TABLE 4
Influenzal Meningitis Treated With Streptomycin Only

Name	Age	Streptomycin-I.M. Results 100,000 U. every 3 Hours	
1. J. P.	7 mo.	X	R
2. S. N.	8 mo.	X	R

cases was under 2 years of age (52 out of 60 cases). Influenzal meningitis is thus a disease of infancy (Table 5).

PATHOLOGY

The pathology of the meninges is the same as in any other form of meningitis. Influenzal meningitis, however, is more frequently accompanied or complicated by pathology of the respiratory tract. Of particular interest was a case of influenzal meningitis which followed intestinal intususception and which has been operated on.

SYMPTOMATOLOGY

Since the greatest frequency of influenzal meningitis is among infants, the symptoms are not always typical of meningitis. The classical meningitic signs may even be absent. A bulging fontanelle is the most frequent objective symptom in young infants.

RECURRENCE

1 case recurred several months after recovery. The patient was treated by streptomycin during the first attack.

SEQUELLAE

Of the cases treated without streptomycin one developed a severe hydrocephalus, one developed blindness and deafness and another one had repeated convulsions and mental retardation. Of the cases treated with streptomycin, 2 developed post-encephalitic symptoms. One of them became mentally deteriorated and the other developed personality changes.

BLOOD

There was a polymorphonuclear leucocytosis in 98% of the cases. In 2% there was a leucopenia. The blood culture was positive in 50% of our cases.

CEREBROSPINAL FLUID

The cerebrospinal fluid was cloudy in all of our cases. The cells varied from 800 to several thousand per cubic m.m. The protein was greatly increased and the sugar was markedly reduced or absent. The organisms were recovered from the cerebrospinal fluid both in smear and in culture in 100% of the cases. The cerebrospinal fluid became sterile as a rule on the fourth day of treatment. The cells usually decreased to 100 or less on the fourth day. The glucose increased and the protein decreased.

TABLE 5
Age of Patients with Influenzal Meningitis

	No. of Cases
Under 6 months	12
6 to 12 months	23
1 to 2 years	17
2 to 3 years	5
3 to 5 years	2
5 years	1
TOTAL	60

SUMMARY AND CONCLUSION

We studied 60 cases of Influenza Meningitis at the Children's Division of the Cook County Hospital between 1942 and 1948.

The age of the patients varied, between 3 weeks and 5 years, but the majority of the cases were under 2 years of age.

The results of treatment in the 60 cases were as follows:

Sulfonamides alone — 6 cases — 6 deaths — 100% mortality.

Sulfonamides and serum — 12 cases — 6 deaths — 50% mortaity.

Sulfonamides, serum and penicillin — 9 cases — 1 death — 11.9% mortality.

Sulfonamides and penicillin — 2 cases —1 death — 50% mortality.

Streptomycin, sulfonamides, penicillin and serum —12 cases — 3 deaths — 25% mortality.

Streptomycin and sulfadiazine — 17 cases — no deaths.

Streptomycin alone — 2 cases — no deaths.

Streptomycin is of definite value in the treatment of influenzal meningitis and should replace all other types of treatment, but whether it can be used alone or in combination with sulfonamides time will tell. At present, we advise to treat all cases with streptomycin and sulfa, in spite of the fact that 2 cases recovered on streptomycin alone.

We advise to give 300,000 units every 6 hours.

The streptomycin should be given intramuscularly only. No intrathecal therapy is necessary.

The streptomycin should be administered for 7 days. However, if the patient does not show marked improvement, it should be continued longer. The sulfadiazine should be continued for 12 days.

Serum should be used only in very stubborn cases when the response to streptomycin and sulfa is of no avail.

30 N. Michigan Ave.

The Management of Labor

L. A. Calkins, M.D., Ph.D.
University of Kansas Medical Center
Kansas City, Kansas

American physicians can be justly proud of the advances made in prenatal care in the past generation. Marked improvements have also come in the care of women after delivery. The care of the woman in labor, however, has received relatively little attention, with two general exceptions. Widespread and still continuing efforts have been expended to improve pain relief. Extensive studies of the proper indications of operative procedures have also been presented to us. Almost no effort has been directed toward a better understanding of the basic physiology of labor, except several recent studies of the third stage.

Too long have we thought of labor as a single continuous process. Too long have we considered the "art" of the management of labor. Aphorism and obstetrical dogma still guide many of our actions rather than sound scientific truth.

Text books have consistently told us that labor is divided into three stages. It has been rather clearly stated that the first stage has to do with effacement and dilatation of the cervix. The second stage has to do with the expulsion of the baby, and the third stage has to do with the separation and the expulsion of the placenta. Quite clearly, these are three separate and distinct processes. The only evidence that they are in any way similar to one another is that they follow upon one another, and all three are associated with uterine contractions. The latter point is not good evidence, since it is well known that uterine contractions are present throughout pregnancy and continue in many patients, quite violently, into the first several days of the puerperium. Careful observation of several successive labors will convince anyone that the former point is no more cogent, and that the three stages of labor are really three separate processes, each with its own fundamental physiology and each, therefore, demanding its own proper management.

The First Stage. — The first stage of labor has to do with the effacement and dilatation of the cervix, or, to put it another way, the removal of the cervix as an obstruction to the delivery of the baby. It is the "cervical stage" of labor. The only factors concerned in this stage of labor are the contractions of the uterus on the one hand, and the resistance to dilatation offered by the cervix on the other hand. Weak and infrequent uterine contractions will dilate the cervix only slowly, or perhaps not at all. Strong and frequent contractions will do the job much more quickly. A firm, thick cervix will resist dilatation much more markedly than a soft, thin one. We pointed out several years ago that the length of any given labor could be predicted to an exact number of hours — almost to minutes — by examining the patient carefully at the onset of her labor, and noting the intensity and frequency of her uterine contractions and the length, thickness, and consistency of her cervix. Nothing else matters. The long-standing belief that a short, fat woman has a long labor is not true. A large baby does not prolong the

Presented before the 108th annual meeting, Illinois State Medical Society, Chicago, May 10-12, 1948.

first stage of labor. Abnormal presentations are not productive of difficulty, and "dry labor" is not a proper explanation of a prolonged first stage. Any or all of these above named items may subseqnently be found to affect the character of uterine contractions to a limited extent, but, in the present stage of our knowledge, they need not be considered. What we do need to analyze in each and every patient is uterine contraction and cervical resistance.

Management of the patient in the first stage, therefore, has three objectives: (1) avoidance of anything that will materially interfere with uterine contractions on the one hand, of cervical resistance on the other; and the employment of anything possible to improve this relationship; (2) maintenance of the best possible condition in the patient as a whole; (3) relief of pain. Opinions as to how all three of these objectives can be best attained will naturally differ widely from one physician to another. There can, however, be no logical difference of opinion as to the basic principles involved.

It is common observation that the cervix remains relatively firm throughout pregnancy, and, even in some patients, to within a few hours of the onset of labor. For some, as yet unexplained, reason, there is usually a considerable softening of the cervix sometime in the last twenty-four hours before labor begins. It is also common knowledge that painless (Braxton-Hicks) contractions of the uterus continue throughout pregnancy, and, at times, may become quite painful. This is particularly true at the time of lightening. A small percentage of patients complain of short periods of "labor pains" for several weeks before the onset of true labor. These may occur in more intensive form in the last several hours before what, on close observation, must be the true labor. It is, therefore, difficult in the occasional patient to know when labor begins. Careful observation of the patient for several successive uterine contractions will, however, reveal the fact that the patient is not going to deliver soon. Such an individual, unmanaged, tends to become fretful, fearful, fails to take proper nourishment, and, after several hours, becomes mentally exhausted and — somewhat later — physically exhausted. Proper management and "moral support" obviates these difficulties. Food and fluid intake must be maintained, fear dispelled, body excretions supervised, and physical rest provided when necessary. To attain these objectives may mean long hours, even days, of the physician's time, as it is rarely possible to entrust these duties to other than the most experienced nurses.

There is nothing to fear with respect to either mother or baby from weak and completely ineffectual pains, or from the true labors which are slow either because of poor contractions or resistant cervix. The pathologically hard cervix, or rigid cervix, is so rare that one needs only to caution that there is such a possibility, and that normal labor should not be expected, but Cesarean Section resorted to. Slow labor, then, is a trial to the doctor, the patient, and the patient's family; but not a cause for grave concern. Rapid labor, on the other hand, particularly when due to violent uterine contractions, is a serious menace to the life of the baby, and, at least, to the tissue integrity of the mother. It is unfortunate that we do not have a simple mechanism available to all whereby the intensity of uterine contractions can be actually measured. Digital palpation of the uterus at the height of uterine contraction will, however, give us sufficient information, if we remain constantly alert to differentiate between the weak contraction, the normal average contraction, and the too intense contraction. It is by this palpation of uterine contractions that we can predict the progress which may be expected, and it is also by this means that we can determine the need for and probable effect of any analgesic or anesthetic. One cannot stress too much the importance of frequent palpation of the uterus.

Pain intensity may vary markedly as labor progresses. It is perfectly futile to give drugs or milder anesthetic agents in the presence of violent uterine contractions. Only deep chloroform or ether anesthetic will affect such contractions. It is also to the disadvantage of the patient to administer even moderate doses of analgesics in the presence of weak and infrequent contractions, unless it is definitely desired to provide the patient with a rest period. The best medication for this purpose is morphine. It is futile to give as little as 1/8 grain for this purpose. All analgesic and anesthetic drugs have some deterrent effect on uterine contractions. The stronger the contraction, the less effect will be observed from a given dosage. Pains of good intensity are not markedly altered by ordi-

nary therapeutic dosages. Weak pains may be very markedly altered. In such patients, the labor will, from natural causes, be quite long enough. Under these circumstances, we would like to give the patient a uterine stimulant. Unfortunately, no safe stimulant has so far been devised. The use of posterior pituitary extract has been, and still is, a very dangerous practice. Doses so small as to produce no result in one patient may well have a violent effect in the next patient. The upright position is very helpful on the whole, and, in some patients, will result in progress where otherwise no progress would take place. Little, if any, result can be expected from the exhibition of Quinine, and hardly more from the use of abdominal binders, except in those patients with marked diastasis recti. One must not overlook the fact that proper rest periods may actually shorten labors, even though the patient sleeps without uterine contractions for a period of several hours. Such rest periods can, in general, not be secured when uterine contractions are frequent and of good entensity, but only when weak and infrequent pains are becoming weaker and still more infrequent.

It is interesting to note that hard working farm women and city athletes rarely have long labors. It has been our feeling for many years that all patients can approach the avoidance of long labor by regular, daily, outdoor walks in the last six weeks of pregnancy. It is also common observation that most of the long labors occur in girls who may not have wanted to become pregnant in the first place, and who are very fearful of their approaching labor and of each and every event in that labor. Grantly Reid and his few disciples have told us that we can dispel a large proportion of this fear by proper advice and encouragement, if we begin early in the pregnancy and continue through the labor. Personal observation will verify that this is, at least partly, so. We can well afford to pay more attention to the psychic aspects of pregnancy, of labor, of the puerperium, and even of child care.

The Second Stage — The second stage, in the light of our present knowledge, is a complicated process, with many factors involved. It is, however, accomplished easily and quickly in the average patient. Here again, intensity and frequency of uterine contractions are very important. On the expulsive side, there is added a considerable voluntary effort. This is uniformly quite intense in the primitive woman and much less marked among the cultured. It is also inhibited when any considerable degree of fear is present. It is not natural for the patient to exert expulsive efforts in the first stage, and such effort should not be encouraged at that time. In the second stage, however, prohibition of voluntary effort by the attendant is next to impossible, except by deep anesthesia. Not only is voluntry effort highly desirable in the second stage, but often very necessary in the presence of weak uterine contractions. It is difficult to decide which is more important in many patients. Many multiparas, of course, deliver themselves by voluntary effort alone. This is occasionally observed in a primipara.

On the resistant aspect of the second stage, one must consider the vaginal walls and pelvic floor, the size of the infant, the degree of flexion of the head, and the time at which internal rotation takes place. No one of these latter factors is very important, nor will it delay delivery very much, except where the uterine pains are very poor and voluntary effort is lacking. If several of these factors are present and are associated with poor pains and lack of voluntary effort, marked delay of the delivery may occur, and operative intervention may become necessary. The main points, therefore, in management of the second stage have to do with the preservation of good uterine contractions, if present, and the maintenance of the patient's ability to exert voluntary effort. Since it is necessary to uniformly administer anesthesia or analgesia in the second stage, the problem is to make certain that the correct degree of anesthesia is maintained. Ether and chloroform have long been known to markedly inhibit uterine contractions, when given in sufficient amount to produce real anesthesia. Caudal anesthesia does not interfere so much with uterine contractions, but entirely abolishes reflex voluntary effort. There is some indication that minimal dose saddle block may be a workable procedure, so far as voluntary effort is concerned. It does not seem to markedly inhibit uterine contractions. Nitrous oxide, expertly administered, has fulfilled both of these qualifications, and been widely used for many years.

The vaginal walls offer almost no resistance to descent in the occiput presentation patients. As a matter of fact, this descent takes place dur-

ing the latter part of the first stage in the majority of patients, and the head is already firmly against the pelvic floor as the cervix recedes over the head. In the majority of the remaining patients, descent to the pelvic floor occurs in the next one to three uterine contractions, and will be uniformly found to have occurred within ten pains. Failure of descent, therfore, is either due to lack of complete dilatation and retraction of the cervix, or pathology in the form of abnormal presentation, hydrocephalus, etc. A vaginal examination should, therefore, be made under sterile precautions in all such cases.

Negotiation of the pelvic floor, whether by the head on the pelvic floor at the time dilatation is complete or by one descending very soon thereafter, is uniformly accomplished within ten pains in all multiparas and in the majority of primiparas, who have good pains. If the primipara's pains are poor, a few more contractions can be expected. Even so, approximately 90% will have delivered within twenty pains or less, and forceps delivery should be considered if the labor is delayed much beyond twenty or twenty-five pains, after one is absolutely certain that the cervix has retracted and that he is dealing with an occiput presentation.

Counting of the labor pains in the second stage has given us much better results than watching the clock. It has improved our clinical judgment as to what constitutes proper progress, and incidentally has reduced our incidence of forceps delivery. Episiotomy will naturally shorten the second stage by one or two pains and may, there fore, be indicated where speed is necessary. Otherwise, it is doubtful whether the final tissue result in the mother is improved by this procedure.

The Third Stage — Our text books have consistently told us that the third stage has two phases. First, separation of the placenta and membranes from the uterine wall takes place spontaneously and very satisfactorily, with rare exceptions. *It is only necessary that we do not interfere.* In the words of the late Whitridge Willaims, "do not bedevil the uterus". Following separation of the placenta, bleeding, either apparent or hidden, behind the placenta, may well take place, unless this structure is promptly expressed. It, therefore, becomes important to recognize placental separation. Immediately after delivery of the baby, the uterus is flattened from before backward and has a rather sharp superior margin. Within a matter of seconds in the average patient, the uterus assumes a truly globoid shape with a broadly rounded superior margin. This change in shape of the uterus has uniformly meant placental separation in our hands. It is our procedure to now briskly massage the uterus, in order to gain the firmest possible contraction. Little or no attempt is made to push the placenta out. If expression of the placenta becomes necessary, it should be done largely by squeezing the uterus with as little downward pressure as possible. The uterus should, at all times, be kept up out of the true pelvis. Following delivery of the placenta, firm uterine contraction should be maintained by massage and, or, the use of oxy-toxic drugs. Posterior Pituitary Extract intra-muscularly, or the newer Ergotrate preparations intra-venously, are very helpful for this purpose. Close attention to the maintenance of firm contraction of the uterus should be maintained for a minium period of one hour. It is also well not to move the patient about for a minimum period of one to two hours. This is especially important in cases of placenta previa and other bleeding patients. A hypodermic of morphine, given immediately after the delivery of the baby, will add materially to the patient's comfort. Most patients also appreciate a hot drink at this time.

This general plan of management of labor, although quite undramatic, has served us well over a long period of years and brought good results for both mothers and babies.

Studies in the Oral Administration of Penicillin

III Oral Penicillin in the Treatment of Pneumococcic Pneumonia

Italo F. Volini, M.D., Wm. Hoffman, M.D., J. R. Hughes, M.D. and J. R. Peffer, M.D., Chicago

Since the isolation of penicillin associated with the discovery of its antibacterial properties[1], numerous studies have been made to determine the efficacy of this type of therapy in infectious diseases. It has proven itself unequivocably as one of the most potent therapeutic agents in the treatment of pneumococcic pneumonia. It is general knowledge that its toxic complications are less marked than those encountered with the use of its chemical predecessors. Parenteral penicillin therapy, however, is still handicapped because of the necessity for injection associated with this mode of adminstration. It is apparent that there is a need for a substitute method of administration utilizing the same marked antibacterial properties so that it could be taken as simply as the sulfonamide drugs.

In the past two years, the evidence has continued to accumulate indicating that orally administered penicillin is capable of producing adequate therapeutic blood levels. However, there has been considerable difference of opinion as to best method for oral usage. McDermott, Saeger, Free etal, Little and Lumb, Charney, Gyorgy, Paul and his associates, Finland, Meades, Burke and others have contributed much to our information of penicillin activity when adminstered orally. Definite knowledge, however, is not yet certain concerning all of the factors such as rate and degree of absorption and the action of the gastrointestinal tract and its secretions on penicillin.

Bunn, McDermott etal[2], also Hoffman and Volini[4] have published satisfactory results recently on the use of oral penicillin in pneumonia. The latter authors in a previous paper[3] indicated that in 100,000 unit dosage preceded by a 200,000 unit initial dose, there was no great variation in blood levels regardless of the preparations used. Controversies pertaining to the use of buffered and unbuffered penicillin are still unsettled. The essential factor most obvious is to obtain satisfactory therapeutic blood levels. If this is possible, clinical results should correspond with those obtained in the use of parenteral penicillin. It is the purpose of this paper to furnish additional results in unselected cases of pneumococcic pneumonia following the use of oral penicillin.

Method of Study.—This report includes a study of 48 patients with pneumococcic pneumonia treated at the Cook County Hospital with oral penicillin. All cases admitted to the hospital presenting clinical signs of lobar pneumonia were included in the study regardless of age and associated complicating diseases. Blood cultures and sputum specimens were obtained as soon as possible after admission. The sputum type was determined by the Neufeld Reaction. Sputum cultures and mouse inoculation were used if needed. All sputum and blood specimens were collected prior to therapy. Within 24 hours after the initial dose of medication, blood was drawn for a penicillin level in most cases. The interval of time between this and the last medication given was noted and recorded.

No other form of specific therapy was used except supportive and symptomatic treatment which was instituted where deemed necessary. Chest x-rays and flouroscopic examinations were made when clinical findings were questionable. All patients in this series were visited daily and individual records were kept of temperature variations and physical findings.

Dosage and Method of Drug Administration.—**The penicillin was used in the form of tablets**

From the Hektoen Institute for Medical Research of the Cook County Hospital and the Departments of Medicine of the Cook County Hospital and the Loyola University School of Medicine.

Aided by a grant from the Commercial Solvents Corporation, Terre Haute, Indiana.

Read before the General Assembly 107th Annual Meeting Illinois State Medical Society, Chicago, May 12, 1947.

TABLE 1

Classification of Cases Studied

Total No. Cases Studied	48
Total No. Typed Pneumococcic Pneumonias	25
Total No. Friedlander's Pneumonia	1
Isolated Pneumococci Failing to Type	1
Total No. Cases of Undetermined Etiology	21

TABLE 2

Typed Pneumococcic Pneumonias

Types	No. Cases	Bacteremias	Fatal Cases
I	4	3	
II	9	4	1
III	1		
IV	2	1	
V	1		
VI	2		
VII	1		
VIII	1	1	
X	2		
XVI	2		
Pneumonias isolated failed to type	1	1	1
Total no. typed Pneumococcic Pneumonias	25	10	1
Friedlander's Pneumonia	1		
Undetermined etiology	21		

each containing 100,000 units prepared with hydrogenated fat, salts of fatty acids and starch. The penicillin was pure crystalline potassium penicillin assaying slightly over 1500 units per miligram and containing over ninety-five per cent of Penicillin G. One tablet 100,000 units was administered every three hours around the clock at 3, 6, 9, 12 o'clock during the twenty-four hours awaking the patient through the night on hours indicated. A primary dose of 200,000 units was given shortly after admission

TABLE 3

PENICILLIN BLOOD LEVELS

Hours	Low	High	No. Cases	Average
		Intramuscular Penicillin		
½	0.25	0.50	2	0.375
1	0.06	1.00	4	0.45
1½	0.06	0.125	6	0.092
2	0.30	0.50	23	0.143
2½	0.06	0.125	9	0.096
3				
		Oral Penicillin		
1	0.06	0.5	6	0.161
1½	0.06	1.0	6	0.259
2	0-.03	1.0	16	0.154
2½	0-.03	0.5	8	0.115
3	0-.03	0.125	8	0.093

to the hospital after the diagnosis of pneumonia was made. The next dose of 100,000 units was given when the clock hands reached 3,6,9 or 12 o'clock on the clock dial. No particular effort was made to separate medication from the ingestion of food. On the schedule outlined at the Cook County Hospital, the adminstration of medication and food occurred together only at the noon time meal. Thus therapy was administered to all patients as soon as possible after admission usually within the first hour. The drug was continued until the patient was afebrile for 48 to 72 hours. This method of dosage and drug administration has been reported by us as producing plasma penicillin levels of 0.06 units per c.c. or higher during most of the three hour interval between doses.

These assay studies reveal plasma levels well above the necessary concentration found in vitro studies to sterilize cultures of the great majority of strains of the pneumococcus. Included with the pneumococcus can be added Group A Hemolytic Streptoccocus, gonococcus and most

TABLE 4

Febril Response Following Oral Penicillin

	Total Cases	%	Typed Pneumococcic Pneumonias	%	Pneumonias of Undetermined Etiology	%
24 hours	18	37.5	10	37.0	8	38.1
48 hours	10	20.8	*5	18.6	5	23.8
Total within 72 hours	30	62.4	15	55.6	15	71.4
Over 72 hours	15	31.3	10	37.0	5	23.8
Expired	3	6.3	2	7.4	1	4.8
Total	48	100.0	27	100.0	21	100.0

*Includes one case of Friedlanders Pneumonia

TABLE 5

Analysis of Age and Mortality Following Oral Penicillin

Age	Total Cases No.	%	Deaths No.	Mortality % 48 Cases
Under 50	31	64.6	1	3.2
Over 50	17	35.4	2	11.8
Totals	48	100.0	3	6.3

TABLE 6

Analysis of Severity of Illness

Total Typed Pneumococcic Pneumonias	52.1%
Incidence of Types 1, 2, 3, 7 & 8	62.0%
Bacteremia	38.0%
Duration Disease Prior to Rx	3.78 days
Multilobar Involvment	29.2%
Average Duration Treatment	5.8 days

TABLE 7

Associated Disease in Pneumonias Treated with Oral Penicillin

Chronic Alcoholism	6
Cirrhosis Liver	2
Pulmonary Tuberculosis	3
Hypertensive Heart Disease	1
Bronchial Asthma	1
Bronchiectasis with Marked Pulmonary Osteo-arthropathy and Generalized Arteriosclerosis	1
Arteriosclerotic Heart Disease with Auricular Fibrillation and Decompensation	1
Rheumatic Heart Disease Compensated	1
Acute Pyelitis	1

of the strains of streptococcus viridans. Staphylococcus Aureus and meningococcus are more resistant as are also some strains of streptococcus viridans from cases of subacute bacterial endocarditis.

RESULTS

There were a total of 26 typed pneumococcic pneumonias in the series of 48 cases (Tables 1, 2, and 6). Sixty-two percent of these were included in types I, II, III, VII and VIII indicting a majority of the more severe pneumococcus invaders. Furthermore, ten cases or 38% (Table 2) of the 26 typed patients proved to be bacteremic with 4 (30%) and 9 (40%) respectively of type I and type II pneumococci. It is apparent from these figures that the cases studied can be considered as the severe type of pneumonia encountered during the peak of the winter season.

The majority of the patients studied were less than fifty years of age, 31 or 64.6% (Table 5) the remaining 17 (35.4%) in the older age group.

TABLE 8

Total Dose Oral Penicillin

Average total	4,410,000 units
Maximum total	14,400,000 units
Minimum total	2,100,000 units

TABLE 9

Complications in Pneumonias on Oral Penicillin

	No. Cases	Percentage	Died
Empyema	3	6.3%	1
Pleural Effusion	3	6.3%	0
Pneumococcic Meningitis	1	2.1%	1
Toxic Hepatitis	1	2.1%	1

TABLE 10

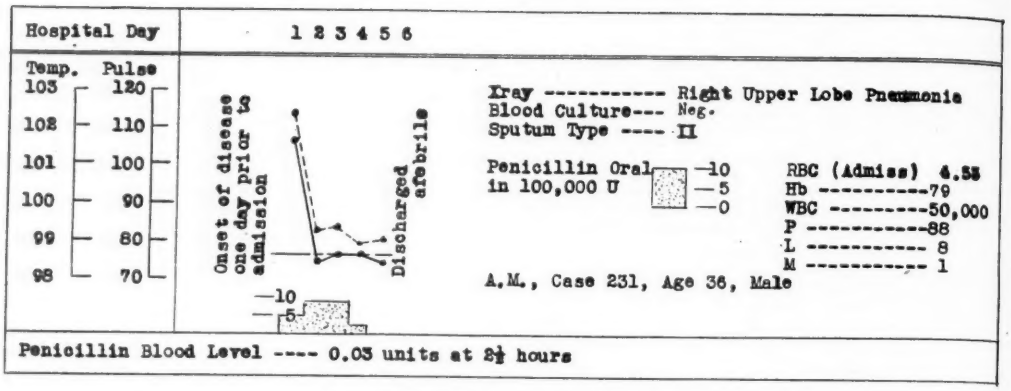
Duration Treatment

Average	5.8 days
Maximum	20.0 days
Minimum	3.0 days

The mortality rate was higher in the older group as would be expected being more than three times that of the patients under fifty years of age. In both age groups, there were 5 cases which showed no response to penicillin therapy but as is indicated later, each of these could not be considered a typical uncomplicated case of lobar pneumonia. The total death rate 6.3% of all cases can be considered as similar to other reported mortality rates in pneumonia patients on chemo or antibiotic therapy; sulphathiazole 12.7% and paranteral penicillin 11.1%[5], combined penicillin and sulfadiazine therapy 6.7%[6], and sulfapyridine 4%[7], sulfadiazine 9.6%[11] and sulfamerazine 11%[10]. It is interesting to note that not only was the mortality rate higher in the older group of patients but the incidence of cases failing to respond to therapy was higher also.

The average duration of disease prior to treatment was 3.78 days (Table 6) and the average duration of treatment was 5.8 days. Since all of the patients treated in this series were kept on therapy for three days after the subsidence of fever, one would assume that the average duration of the disease after the onset of therapy was 2.8 days. As is illustrated in Table 4, 62.4% of the patients became afebrile within 72 hours and 20.8% responded in more than 72 hours. This constituted 10 cases of the entire group, all of which became afebrile within the next 48 hours

Chart I

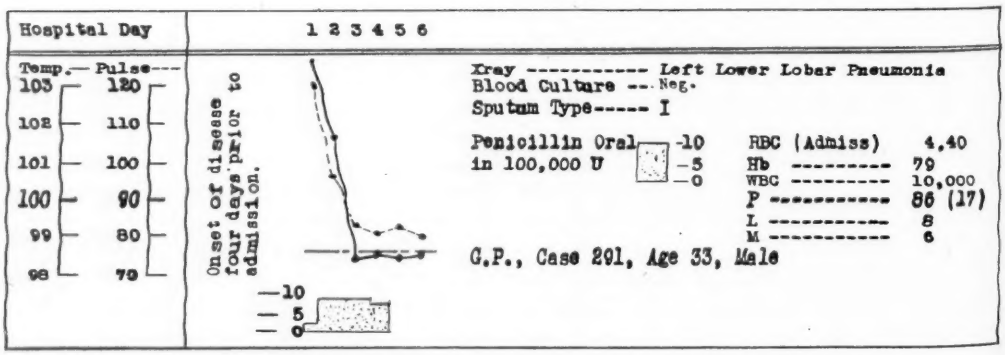


Typical febrile response to Oral Penicillin

or a total of five days. All patients maintaining fever for a longer period of time were included in the "no response group" 10.5%. Eighteen cases demonstrated a rapid febrile decline within 24 hours. The majority of these however were treated very early, within 24 to 48 hours after the onset of the initiating symptoms of the disease. Ten (20.8%) of the 48 cases responded in two days with 58.3% response in 48 hours including the 24 hour group. This is considerably lower than the 48 hour (77%) response reported in a previous paper (3). However, this latter figure represents the effect of oral penicillin therapy on a selected group of patients with manifest symptoms of uncomplicated pneumonia. Also, in the previous report, the type of pneumococcus and the presence of bacteremia were not routinely determined to indicate the virulence of the invading organism.

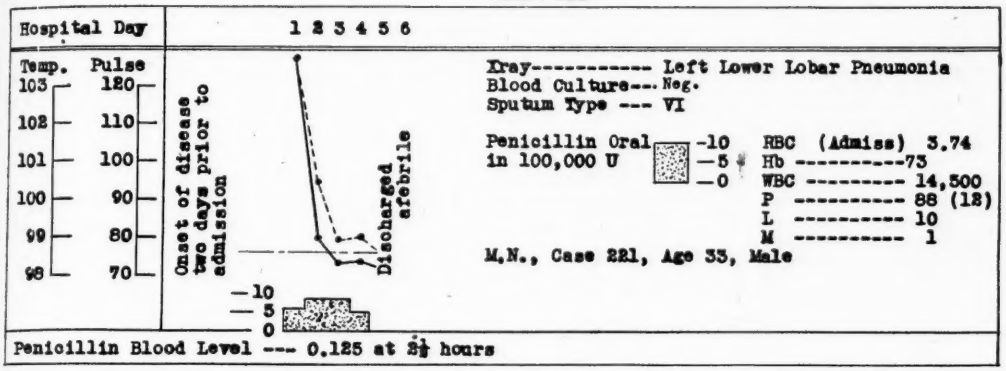
Clinical Response.—Chart I is a typical illustration of the early fall of temperature by crisis that was noted in most of the cases studied. In a charity institution such as Cook County Hospital, prolonged exposure and a greater tendency toward malnutrition must be considered in evaluating response to therapy of disease. As is mentioned above, the average febrile period following treatment was approximately 2.8 days or 67.2 hours. It is difficult to diagramatically represent such a response as an indication of the clinical course of all cases studied. This diagram is characteristic of the febrile course of the majority of the patients indicating its rapid abrupt fall to normal. The usual clincal response to oral penicillin is, in most cases, as dramatic as that of the parenteral form of adminstration of the drug, and in uncomplicated or selected cases,

Chart II



Typical febrile response to Oral Penicillin

Chart III



Typical febrile response to Oral Penicillin

Chart IV

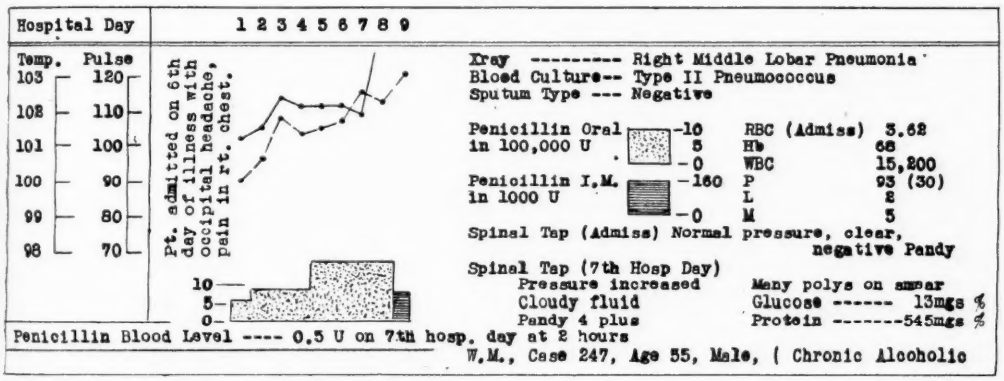


Chart V

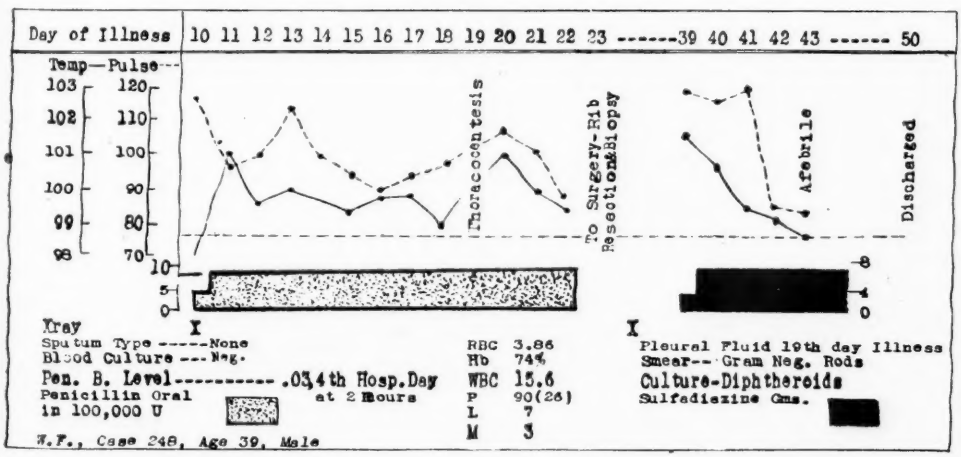
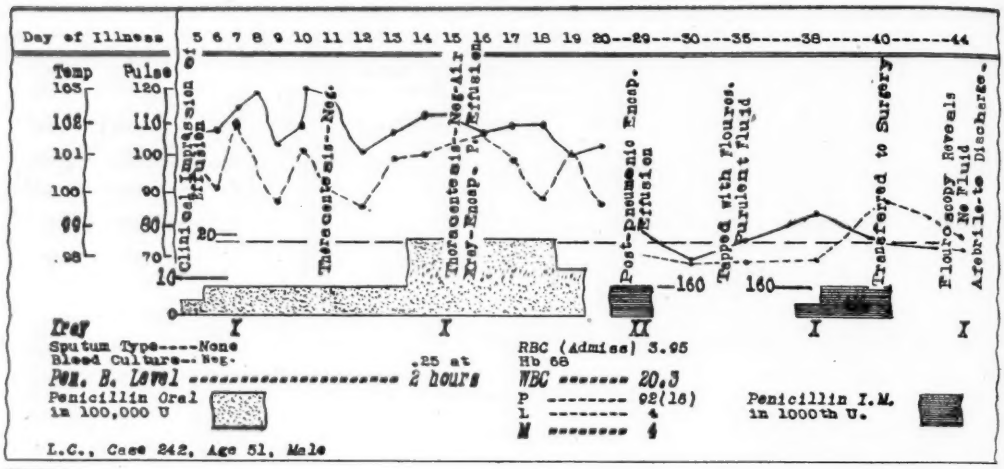


Chart V.- Clinical course and illustration of duration of illness following surgical drainage in a case of empyema included in " no response group "with broncho-pleural fistula.

Chart VI

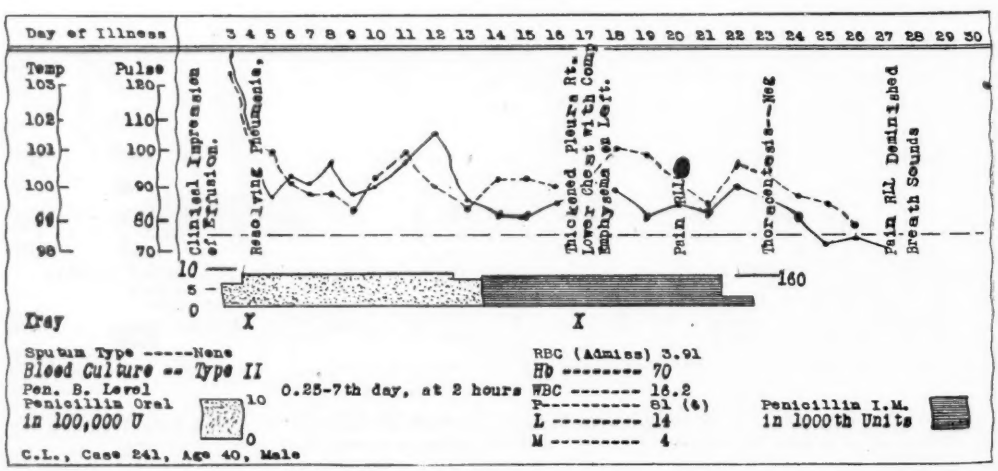


equal to it. Chart II and III illustrate the expected response, in a typical response group.

Chart IV indicates the one death in the typed pneumococcus series. Male heavy alcoholic with type II bacteremia, 55 years of age, was admitted eight days after onset of illness with *a right middle lobe consolidation, severe* headache and neck rigidity pronounced enough to indicate a spinal puncture on entrance. *This proved negative but clinical symptoms forced a* repeated puncture which showed meningitis. *This did not respond to treatment. As this* series includes complicated pneumonias as admitted, *this patient with the mortality is part of* the statistical compilation presented in this study.

Untoward Effects of Penicillin.—Parenteral Penicillin has been reported giving 5.7 and 5.5 percent skin reactions. Our experience in the *oral method administration previously reported* was 3.8 percent. However, using the pure crystalline potassium preparation in *this series of* pneumonia patients one mild erythema reaction was noted. Urticaria did not develop. Skin reactions to crude penicillin are frequent. The purity of the drug probably accounts for the in*frequency of untoward effects.*

Chart VII


Day of Illness
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
Temp
Pulse
Clinical Impression of Effusion.
Resolving Pneumonia.
Thickened Pleura Rt. Lower Chest with Comp. Emphysema on Left.
Pain Rt.
Thoracentesis--Neg
Pain Rt. Diminished Breath Sounds
Xray
Sputum Type -----None
Blood Culture -- Type II
Pen. B. Level
Penicillin Oral in 100,000 U
0.25-7th day, at 2 hours
RBC (Admiss) 3.91
Hb 70
WBC 16.2
P 81 (4)
L 14
M 4
Penicillin I.M. in 1000th Units
C.L., Case 241, Age 40, Male

COMMENT AND DISCUSSION

The assay and dosage studies by Hoffman and Volini already referred to several times indicate blood level determinations of penicillin. The lower concentrations of penicillin which are attained in the blood and the urine following the oral use, as compared to the parenteral method is probably mainly the result of a defect in absorption. It is not due to penicillin lost by acid destruction. Clinical employment of the oral method requires about five times the parenteral dosage as our assay studies show. Blood levels averages of 0.093 unit per c.c. are demonstrated in this series at the third hour. Such levels should be effective against infections by most of the organisms regarded as sensitive to penicillin. Pneumococci are inhibited at 0.03 unit per c.c. levels. Frequently 0.01 units per c.c. suffices. The anticipated favorable response not occurring in a 48 hour period of oral administration demands a reappraisal on the following postulates:

1. Blood level inadequate because of absorption defects or other reasons.
2. Penicillin insensitive organism or penicillin insensitive strain of an ordinarily sensitive organism.
3. Complications such as effusion empyema, meningitis, abscess.
4. Complicating diseases such as produced by additional micro-organisms but which are insensitive to penicillin.
5. Complicating diseases which disrupt the immunological mechanisms which are necessary to recovery from infectious disease.

The therapeutic course must be charted then accordingly, guided by the new evidence, obtained through the reappraisal. This may be accomplished by increasing the dosage of the oral drug, by administering penicillin parenterally or locally or topically by surgical drainage, by adding other forms of specific or non specific therapy. The in vitro sensitivity testing of the invading organism to penicillin may be valuable information for determining the course of procedure.

SUMMARY AND CONCLUSIONS

1. This report comprises a study of 48 pneumonia patients treated with oral penicillin.
2. The dosage consisted of 200,000 units initially on admission to the hospital followed by 100,000 units at each clock hour of 3, 6, 9, 12 day and night.
3. Adequate therapeutic levels against pneumococci were demonstrated by penicillin assay of the blood using the oral dosage described.
4. No attention was paid to the time relationship of penicillin administration to food intake.
5. Specific buffering agents were not employed.
6. There were three deaths in this series, 6.3% in all and in the typed pneumococcic group 7.6%. This is much less than in studies we have reported for sulfathiazole, sulfadiazine and sulfamerazine therapy. This would indicate that oral penicillin as employed in this series is a better therapeutic agent than the sufonamides.
7. The major deterrent to oral penicillin therapy in the indicated dosage is the cost of this medication. Compared to sulfadiazine it requires five times the financial outlay. Cost comparison with parenteral penicillin is difficult to estimate because cost of services must be included in the latter computation.
8. The severity of the infection has been found to have slight relation to the dosage of penicillin required providing therapeutic blood levels are maintained. The sensitivity of the pneumococcus to pencillin is marked and is the determining factor in dosage. Bacteremia responds to the dosages advised. Complications such as meningitis, empyema, acute bacterial endocarditis are refractory to almost any dosage and usually require local or topical administration to be of benefit.
9. The temperature returns to normal in the primary atypical pneumonias or pneumonias of undetermined etiology parallel the response given by pneumococcic etiology on the same therapy. This suggests that these atypical pneumonias should be given similar therapy to those of pneumococcic etiology.
10. The treatment of pneumonia by oral penicillin in the dosage and by the methods described proved as satisfactory if not superior to chemotherapy and almost the equal of parenteral penicillin treatment.

1511 North Dearborn Parkway

BIBLIOGRAPHY

1. Fleming, A. On the Specific Antibacterial Properties of Penicillin Jour. Path. & Bact. 35: 831, Nov. 1932.
2. Bunn, P. A., McDermott, W. etal "The Treatment of Pneumococcic Pneumonia with Orally Administered Penicillin" J.A.M.A., 129: pp 320-327, Sept. 29, 1945.
3. Hoffman, Wm. and Volini, I. F. "Studies in the Oral Administration of Penicillin, I, Assays of Various Preparations and the Determination of the Effective Therapeutic Dose," Amer. J. Med. Sciences (In Press).
4. Hoffman, Wm. and Volini, I. F., "Studies in the Oral Administration of Penicillin, II, Results of Treatment of Pneumococcic Lobar Pneumonia and Other Acute Infections with Several Oral Penicillin Preparations." Amer. J. Med. Sciences (In Press).
5. Anderson, T., and Ferguson, M. S. Glascow, "Comparative Effects of Sulfonamides and Penicillin in Pneumonia," The Lancet, 249: 805-808, Dec. 22, 1945.
6. Collen, M.F., Sellers, A. L., and Kast, E. C. "Combined Penicillin and Sulfadiazine Therapy in Pneumococcal Pneumonia," Amer. J. Med. Science, 211: 299-306, March 1946, Oakland, Calif.
7. Volini, I. F., and Levitt, R. O., "The Sulfapyridine Treatment of Pneumococcic Pneumonia," Ill. Med. J. 78: 305-314, Oct. 1940.
8. Meades, M., Ory, E. M., Wilcox, C. and Finland, M. "Penicillin Sensitivity of Strain of Six Common Pathogens and of Hemophilus Hemolyticus," Boston, Mass., J. Lab. & Clin. Med., 30: 725-729, Sept. 1945.
9. McDermott, W., Bunn, P., Benoit, M., etal, "The Absorption of Orally Administered Penicillin Science," March 1946, 103: 359.
10. Volini, I. F. Engbring, G., Schorsch, H., "Sulfamerazine in The Treatment of Pneumonia," Ill. Med. Jour.
11. Volini, I. F., Engbring, G., Peffer, J., Schorsch, H., "Treatment of Pneumonia with Sulfadiazine," Med. Clin. N. Amer., Jan. 1944, 28-1-P. 267-277.

Routine Technic of a Typical Rhinoplasty

Samuel Fomon, M.D. and
Victor R. Syracuse, M.D.
New York City

I. PREOPERATIVE MANAGEMENT

1. One hour before operation, administer 2 capsules (0.13Gm) nembutal.

2. Clip vibrissae with blunt-end scissors. Do not puncture vestibular skin. Scrub vestibules with green soap and water on cotton-tipped applicators. Swab with alcohol; follow with ether.

3. Anesthetize nasal fossae: Dip 3 cotton-tipped applicators in solution of equal parts 10 per cent cocain and 1:1000 adrenalin, squeeze out excess fluid, and insert as follows (Figure 1): (a) One beneath dorsum along olfactory sulcus (internal nasal nerve block). (b) One at foot of middle concha (sphenopalatine ganglion block). (c) One along floor of nose (nasopalatine and anterior palatine nerve block). Repeat procedure on opposite side.

4. Instil 2 drops of sterile castor oil into each eye. Transfer patient to operating table, with head slightly elevated on pillow.

5. Second Assistant: (a) Scrub hands. (b) Don gloves but no gown. (c) Drape head and neck of patient with sterile linen. (d) Withdraw nasal applicators. (e) Scrub face and vestibules with green soap and water on gauze sponges for 3 minutes. (f) Swab face and vestibules with alcohol, followed by ether. Avoid mucosa. (g) Remove gloves and don sterile raiment. (h) Stand by.

6. First Assistant: (a) Re-drape patient from head to foot. (b) Arrange instruments on Mayo table. (c) Take position at patient's left.

7. Operating Surgeon: (a) Take position at patient's right. (b) Pack nasal fossae with long strips of half-inch gauze, leaving vestibules clear. (Figure 2).

II. OPERATIVE MANAGEMENT

A. Anesthetization of External Nasal Pyramid.

1. Elevate left ala with rake retractor. Locate plica nasi (anatomic shelf formed by lower margin of upper lateral cartilage). Place 5 cm. 24-gauge needle at center of upper surface of this ledge (Figure 3). Under control of fingers advance needle in plane above perichondrium and periosteum to nasal root. Discharge 0.5 cc. of solution—1.5 per cent monocain to which has been added 10 drops to the ounce 1:1000 adrenalin—(infratrochlear nerve block). Withdraw needle to junction of nasal bone and upper lateral cartilage and deposit another 0.5 cc. (external

Presented before the Section on Eye, Ear, Nose and Throat, 107th Annual Meeting, Illinois State Medical Society, Chicago, May 12-14, 1947.

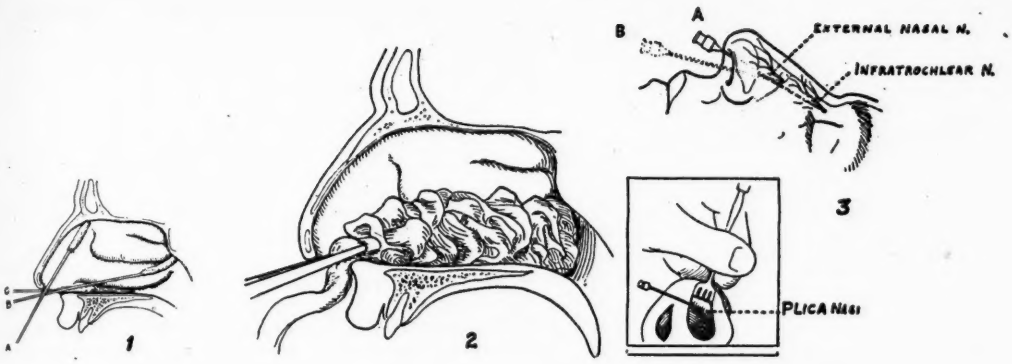


Figure 1 — Nasal mucosa anesthetized by direct block. A, Internal nasal nerve block. B, Sphenopalatine block. C, Nasopalatine and anterior palatine block.

Figure 2 — Gauze strip introduced to prevent escape of blood into nasopharynx.

Figure 3 — Infratrochlear and external nasal block. Five-centimeter 24-gauge needle introduced into plica nasi. A, Needle advanced to nasal root and 0.5 cc. of solution discharged. B, Needle withdrawn to caudal margin of nasal bone and 0.5 cc. discharged.

nasal nerve block). (Figure 3). Repeat procedure on opposite side.

2. Change to 4 cm. 24-gauge needle. Introduce intranasally at outermost margin of pyriform opening. Carry to point at imaginary intersection of (a) vertical line drawn 1 cm lateral to inner canthus, and (b) oblique line from columella to lateral canthus. (Figure 4). Discharge 0.5 cc. of solution as needle is withdrawn (infraorbital nerve block). Repeat on opposite side.

3. Change to 2½ cm. 24-gauge needle. Introduce at anterior nasal spine. Advance along floor of nose to incisive foramen. On withdrawal introduce 0.5 cc. of solution (nasopalatine and anterior palatine nerve block) (Figure 5). Repeat on opposite side.

B. Uncovering of Nasal Framework.

1. Elevate left ala, using rake retractor. Locate plica nasi. With Bard-Parker No. 11 knife incise aponeurosis connecting upper and lower lateral cartilages. Begin incision at center of

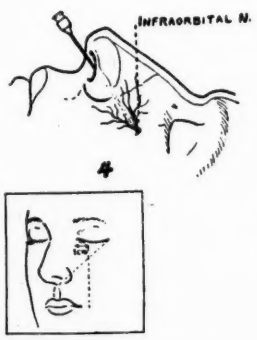


Figure 4 — Infraorbital block. Four-centimeter 24-gauge needle introduced at outermost margin of pyriform opening, carried to intersection shown in insert, and 0.5 cc. of solution discharged.

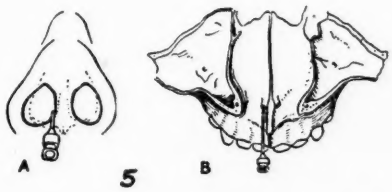


Figure 5 — Anterior palatine and nasopalatine block. Two and one-half centimeter 24-gauge needle introduced at anterior nasal spine, advanced along floor to incisive foramen, and 0.5 cc. of solution discharged.

Figure 6 — Plica nasi exposed and aponeurosis connecting upper and lower lateral cartilages incised with Bard Parker No. 11 knife.

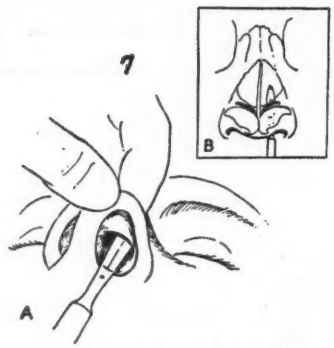


Figure 7 — Soft structures overlying upper cartilaginous vault elevated. A, Double-edged knife introduced into vestibular incision and carried to caudal margin of nasal bone in plane above perichondrium. B, Ventral view.

Figure 8 — Knife swept from side to side, separating structures for distance equal to width of blade.

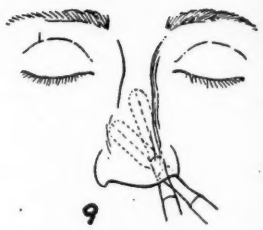


Figure 9 — Separation of soft structures continued over dorsum with blunt, curved, double-edged knife.

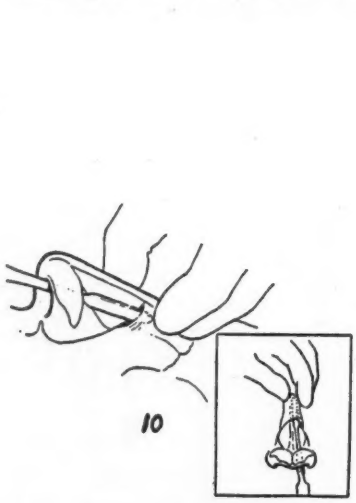
plica and extend it ventrally to septum. (Figure 6). Make similar incision on opposite side.

2. Into left incision introduce straight pointed double-edged Joseph knife. (Figure 7). Carry to a point 1-2 mm. above caudal margin of nasal bone in plane immediately above perichondrium of upper lateral cartilage. Sweep knife from side to side, separating structures for distance equal to width of blade, and withdraw. (Figure 8). Repeat procedure on right side.

3. Through left incision introduce Fomon's curved double-edged blunt-tipped knife, and continue separation over dorsum in same plane as before. (Figure 9). Repeat on opposite side.

4. Through left incision introduce MacKenty elevator and incise periosteum 1-2 mm. above caudal rim of nasal bone. Substitute Joseph's periosteal elevator and elevate periosteum over dorsum up to nasofrontal suture. Do not tear periosteum. (Figure 10). Repeat on opposite side. Soft tissues overlying ventral and lateral nasal walls are thus freed.

5. Introduce button-end knife through left incision and advance to nasofrontal suture, knife hugging perichondrium of upper lateral cartilage and passing beneath periosteum of nasal bone. Sweep obliquely downward across dorsum



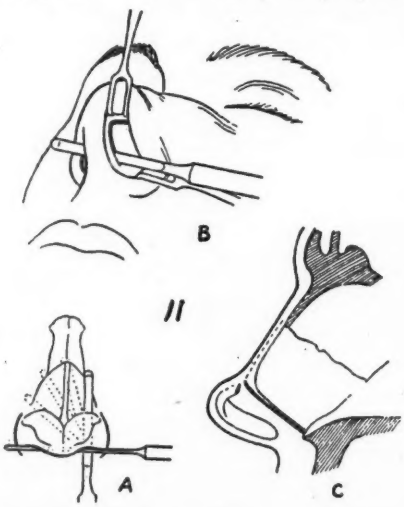


Figure 10 — Periosteum over nasal bone elevated.

Figure 11 — Caudal exposure of nasal pyramid. A, Button-end knife introduced, advanced to nasofrontal suture, swept obliquely downward until tip appears through opposite intercartilaginous incision. B, Membranous septum cut through. C, Line of separation.

Figure 12 — Completion of caudal exposure. Membranous septum straddled by Mayo scissors and structures divided to nasal spine.

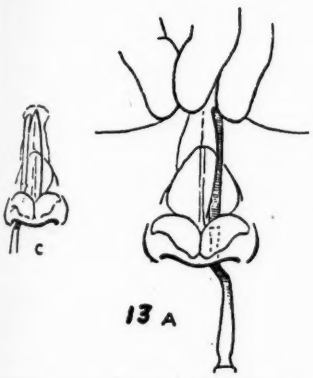


Figure 13 — Removal of hump. A, Left saw placed against bone at level to attain desired profile angle. B, Left nasal bone and perpendicular plate of ethmoid cut through. Niche made in right nasal bone. C, Saw-cut through right nasal bone completed.

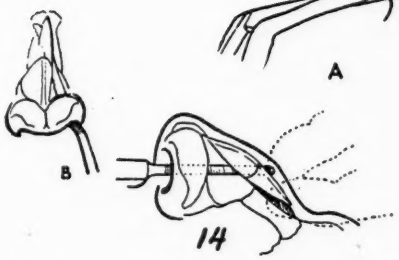


Figure 14 — Cartilaginous hump cut through with button-end knife.

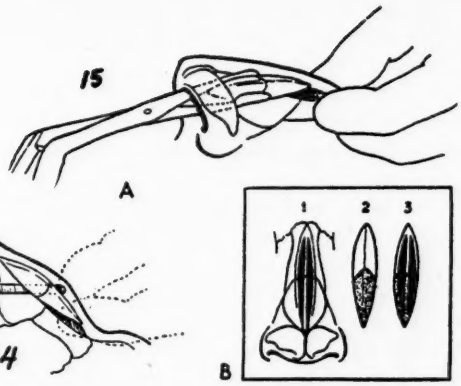


Figure 15 — A, Hump extracted. B-1, Appearance of dorsum after removal of hump. B-2, Ectal surface of hump. B-3, Ental surface.

until tip appears through intercartilaginous incision in right vestibule (Figure 11A).

6. Without altering plane of knife (which now transfixes nose), cut to caudal end of septum.

7. Turn knife at a right angle and, with blade hugging caudal margin of septal cartilage, divide membranous septum through 2/3 of its extent. (Figure 11 B and C).

8. Take position at head of patient. With straight Mayo scissors held perpendicular to nasal spine, straddle membranous septum, points of scissors being made to lie on nasal spine. (Figure 12). With one snip of scissors complete separation.

C. *Removal of Hump*

1. Retract left ala. Locate incision in plica nasi. Introduce left bayonet saw.

2. With teeth directed dorsally, advance instrument beneath periosteum to nasofrontal suture. Turn teeth of saw at a right angle to nasal wall and place against bone at level to attain desired profile angle, previously determined by cast, photographic, and biometric analysis.

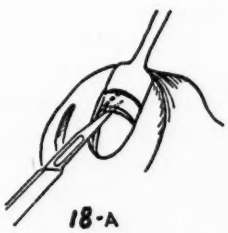
3. Check position of saw with analyzed photographs and cast, held in same position as patient's head.

4. With fingers of left hand fix apex of saw. With handle of saw held in right hand, wrist and elbow rigid, saw through nasal bone, using shoulder joint as fulcrum. (Figure 13A). When bone has been cut through, indicated by a loss of resistance, shift handle obliquely and continue sawing through perpendicular plate of ethmoid. When this has been accomplished, tip of saw will be felt at nasal root on opposite side. (Figure 13B).

5. Remove left saw.

Figure 16 — Bony margins polished with rasp.

Figure 17 — Cartilaginous margins pared with angulated knife.



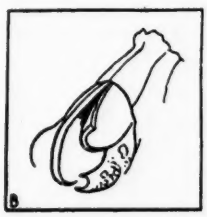


Figure 18 — A, Angle between septum and upper lateral cartilage cut through with Bard Parker No. 11, angulated speculum serving as guard. B, Appearance of cartilages after division.

6. Retract right ala and introduce right bayonet saw, same as left. Fix point of saw at root in niche made by left saw.

7. Place saw against right nasal bone at same level as saw cut on left side. Check level by palpating left groove. Saw through bone. (Figure 13C).

8. Palpation discloses that bony hump is now free and cartilaginous hump fixed.

9. Retract left nostril. Introduce short button-end knife into vestibular incision. Insert blade beneath severed bony hump.

10. Draw knife down, cutting cartilaginous portion of hump away from upper lateral and septal cartilages, maintaining same level throughout, until instrument falls free into tranfixion incision. (Figure 14).

11. Extract hump with hemostat or Knight forceps. (Figure 15).

12. Palpate nasal dorsum. Note central ridge formed by perpendicular plate of ethmoid and septal cartilage, and two lateral ridges composed of frontal processes of maxillae and upper lateral cartilages. (Figure 15).

13. Examine hump for symmetry. In the event of bony asymmetry, pass Fomon rasp through left vestibular incision, and file until plane of dorsum is even (Figure 16). If sides of cartilaginous hump are asymmetrical, introduce right-angled cartilage knife and pare projecting side until it equals its fellow (Figure 17).

14. Remove bone dust, spicules, and other debris with sweeper.

15. Finally, introduce angulated nasal speculum. Throw light into nose and inspect dorsum.

D. Shortening of Nose

Shortening of Median Wall (Septum)

1. Insert 2-pronged retractor into left nostril and draw soft tissues to one side, exposing septum and upper lateral cartilages.

2. Inspect septum and note flare of upper lateral cartilages.

3. Remove retractor and introduce angulated speculum between soft tissues and cartilaginous vault. Use this instrument as a guard.

4. With a No. 11 Bard-Parker knife separate septum from upper lateral cartilage, blade cutting up on speculum. (Figure 18A).

5. Repeat on opposite side. Inspection will disclose 3 structures—the septum in the middle and the upper lateral cartilages on either side. (Figure 18B).

6. Introduce retractor into left nostril and draw soft tissues aside to expose septal cartilage.

7. Take position behind patient. Grasp caudal end of septal cartilage with fixation forceps. With straight Mayo scissors held perpendicularly and straddling septum, excise triangle with base on dorsum and apex at anterior nasal spine. Size of base will govern amount of shortening, as previously determined by analysis. (Figure 19).

Shortening of Lateral Walls (*Upper Lateral Cartilages*).

Before shortening the lateral walls (upper lateral cartilages) is is necessary to reapproximate the columella to the septum in order to gauge the proper amount to be excised. (Figure 20).

1. Pass straight cutting needle armed with heavy silk (No. 1 or No. 2) through full thickness of ventro-caudal (antero-inferior) angle of septal cartilage (perichondrium, cartilage, perichondrium). Continue suture by passing needle through full thickness of columella (vestibular skin, mesial crura, vestibular skin) at junction of anterior and middle thirds.

2. Tie first loop of knot and exert tension on ends. Note gradual forward projection of lobule.

3. When proper projection has been attained, as determined by preoperative analysis, complete tie.

4. Using same needle and suture, reinforce orthopedic stitch by passing another suture through full thickness of posterior 1/3 of septum and corresponding part of columella.

5. Retract ala with rake retractor and note projection of upper lateral cartilage into vestibule.

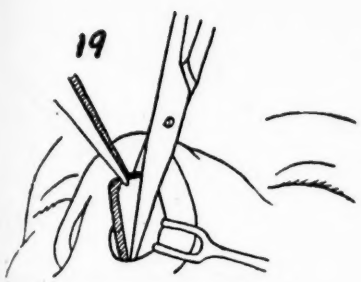
6. Grasp protruding portion with rat-tooth forceps, but exert no traction. With angulated scissors excise projecting part flush with incision. (Figure 21).

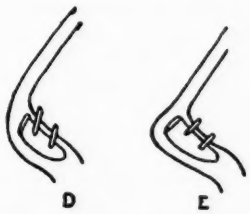
7. Repeat on opposite side.

E. Narrowing of Nose

Flatness of dorsum following hump removal is eliminated by shifting of lateral walls to midline. This is accomplished by lateral osteotomies through frontal processes of maxillae.

Lateral Osteotomy.—1. Retract left ala. Locate lateral margin of apertura pyriformis (point below alar-facial junction). With a No. 11 Bard-Parker knife incise overlying mucosa down to bone. (Figure 22).





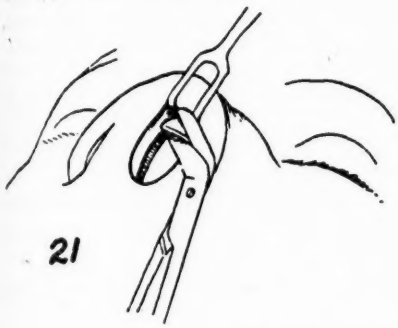
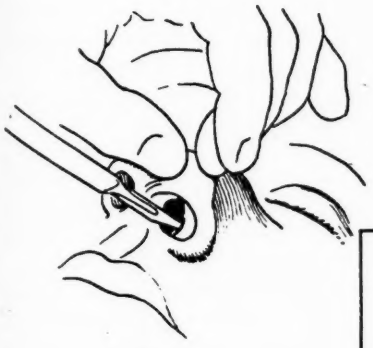


Figure 19 — Removal of triangle from caudal margin of septum. Size of base will govern amount of shortening.

Figure 20 — A, Approximation of columella to shortened septum with 2 oblique silk sutures. B and C, Sutures tied, bringing lobule forward. D and E, Clarification of method.

Figure 21 — Shortening of upper lateral cartilage. Protruding portion of upper lateral excised flush with incision.



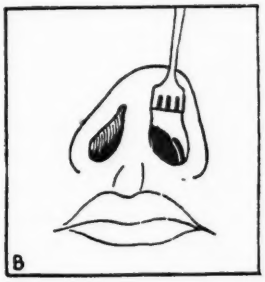
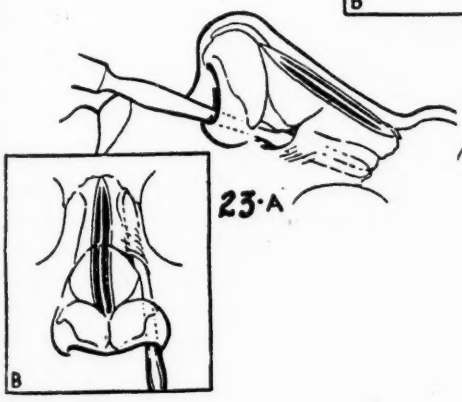
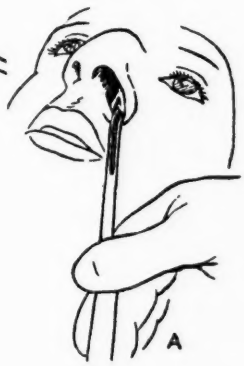


Figure 22 — Lateral osteotomy. A, Mucosa overlying lateral margin of apertura pyriformis incised with No. 11 Bard Parker. B, Line of incision.

Figure 23 — A, Elevator introduced beneath periosteum and tissues raised en masse over line of proposed saw cut. B, Ventral view.

Figure 24 — A, Grooved director introduced into incision along margin of pyriform opening. B, Line of saw cut indicated by dotted line.





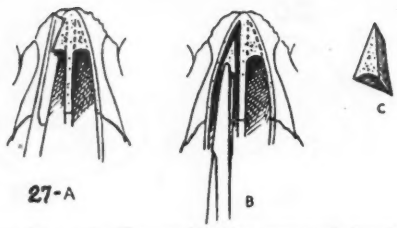


Figure 25 — A, Saw, guided by grooved director, introduced into periosteal pocket. B, Saw engaged along nasofacial groove, apex midway between inner canthus and nasion and base resting on outermost margin of pyriform opening. Bone cut 2/3 through.

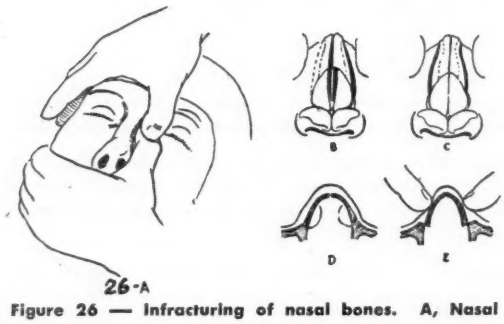


Figure 26 — Infracturing of nasal bones. A, Nasal bones brought to median line by thumb pressure. B, One wall shifted inward. C, Appearance after infracture of both walls. D and E, Sectional views.

2. Introduce MacKenty elevator beneath periosteum and raise overlying tissues en masse from nasofacial groove to point midway between nasion and inner canthus. (Figure 23). Extent of elevation should be no more than to comfortably admit saw.

3. Introduce grooved director into incision made along margin of pyriform opening (Figure 24). Using this as a guide, pass left right-angled saw into periosteal pocket, teeth directed downward (Figure 25A). Remove director. Turn saw so that teeth lie at right angles to bone. Manipulate instrument until it falls into nasofacial groove, apex lying at a point just below and medial to inner canthus, and base at outermost margin of pyriform process (Figure 25-B). Place fingers of left hand over apex of saw to fix it and protect inner canthus.

4. With several up and down strokes cut through 2/3 thickness of bone. Under no circumstances cut all the way through.

5. Repeat procedure on right side.

6. Take position on left side of patient. Place pad of gauze over left nasal wall. Brace both

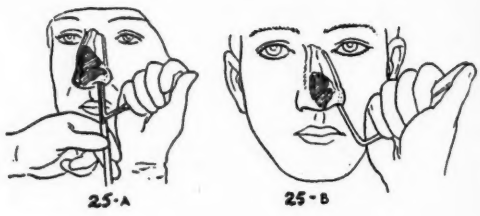


Figure 27 — Removal of bony wedge. A, Lateral wall of bony wedge cut through by guarded chisel held obliquely. Dotted lines indicate course of chisel cuts. B, Wedge removed. C, Appearance of wedge.

thumbs over gauze, spread fingers over opposite zygoma, and with moderate pressure force nasal walls to midline. (Figure 26). Repeat on opposite side. Complete fracture will be evidenced by a short, decisive snap. If greenstick, the sound will be less distinct and the bones less movable, with a tendency to spring back into place.

7. Introduce Walsham forceps and rotate left nasal wall into nasal fossa. Repeat on opposite side. This will overcome any tendency to a subsequent broadening of the arch which might arise in the process of osteogenesis.

If the excessive width includes the solid block of bone at the nasal root, bony wedges must be removed from this area prior to the lateral osteotomy, to make room for shifting lateral walls to midline.

Removal of Bony Wedge.—1. Engage Fomon guarded chisel at junction of solid block of bone and frontal process of maxilla. With few taps of mallet on chisel held obliquely, cut through bone to nasofrontal articulation. (Figure 27A).

2. Engage chisel at junction of solid block of bone and perpendicular plate of ethmoid. Cut through obliquely so that chisel cuts meet beneath wedge.

3. Extract bony wedge with stout hemostat. (Figure 27 B and C).

4. Repeat on opposite side.

F. Modelling of Lobule

Notice that the lobule, even if in proper relationship to the balance of the nose before operation, is now relatively too wide and too projecting and must be modelled if it is to harmonize with the reconstructed osseous and upper cartilaginous vault.

1. Retract left ala and with No. 15 Bard-Parker knife make semicircular incision through

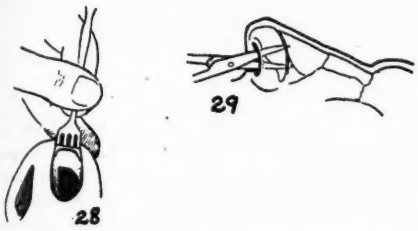


Figure 28 — Modelling of lower lateral cartilages. Circumferential incision along caudal margin of lower lateral cartilage.

Figure 29 — Overlying structures separated in plane immediately above perichondrium. Blunt-end scissors passed from circumferential incision to original intercartilaginous incision.

vestibular skin along caudal (lower) margin of lower lateral cartilage (Figure 28).

2. Introduce blunt-end scissors between lower lateral cartilage and overlying structures, hugging perichondrial plane (Figure 29).

3. Gradually separate tissues in upward (cephalad) direction until instrument falls into initial incision in plica nasi.

4. Carry scissors obliquely and gradually separate overlying skin until angle of lower lateral cartilage is completely freed.

5. Repeat procedure on opposite side, so that separation over entire lobule is complete.

6. With dural hook placed exactly beneath angle of left lower lateral cartilage, draw cartilage out of nostril. Under this double-edged pedicled vestibular skin-cartilage flap pass Neivert grooved director (Figure 30-A).

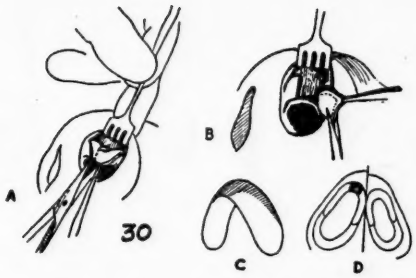


Figure 30 — A, Liberated lower lateral cartilage withdrawn as double-pedicled flap and supported by strabismus hook. Dots indicate line of section. B, Lateral flap drawn out and trimmed along dotted line. C, Amount of tissue to be removed indicated by shaded area. D, Effect of cartilaginous excision on projection and width of tip.

7. Deliver right lower lateral cartilage in like manner.

8. Divide cartilages at angles.

9. Steady left lateral flap (lateral crus) with dural hook, and with fine scissors pare cephalic margin of cartilage sufficiently to reduct bulbousness (Figure 30 B, C, D). De-epithelize free end of cartilage for distance of 3-4 mm. Repeat on opposite side. (Figure 31).

10. To reduce projection, draw out mesial crura with dural hook, remove intercrural soft tissue. Trim cartilages desired amount. Approximate mesial crura with 5-0 catgut. Finally, pinch cartilages into position so that de-epithelized lateral crura form inverted V over mesial crura. This approximation serves not only to narrow tip, but also gives it a more natural appearance by projecting it slightly beyond the dorsal line.

G. *Modelling of Columella*

1. Through transfixion incision, excise excess

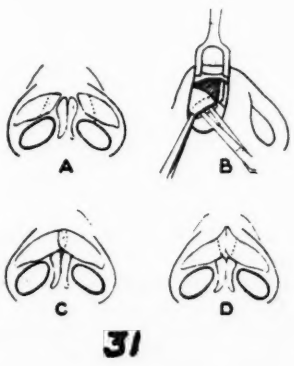


Figure 31 — A, De-epithelized surfaces of lateral crura overlapped. B, De-epithelized surfaces brought together over mesial crura in form of inverted V.

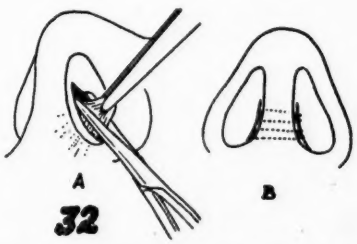


Figure 32 — Modelling of columella. A, Excess subcutaneous tissue and cartilage excised from columella. B, Mesial crura approximated with black silk.

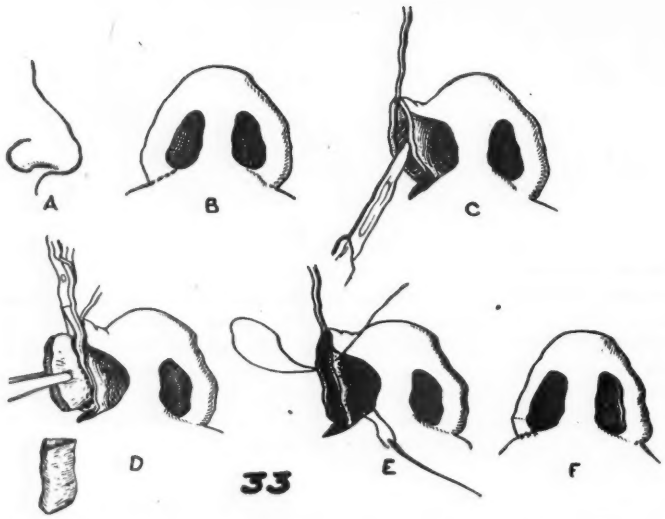


Figure 33 — Reduction of thick alae. A-B, Alae separated from cheek along alarfacial groove. C, Sharp dissection of fatty pad between skin layers. D, Resection of fatty wedge. E, Skin edges brought together with silk suture, so passed that loop disappears beneath skin surface. F, Alae reattached.

subcutaneous tissue and cartilage from columella. (Figure 32).

2. Approximate mesial crura with black silk.

H. *Modelling of Alae*

If too thick. (Figure 33) 1. Separate alae from cheek along alarfacial groove.

2. Dissect out fatty pad between external and vestibular skin.

3. Approximate raw surfaces with through and through sutures, tied on vestibular surface. Pass in such a manner that loop is lost beneath skin surface.

4. Repeat on opposite side.

If too long. (Figure 34) 1. Separate ala from cheek along alarfacial sulcus.

2. Force alar rim beneath mesial margin of wound until proper configuration is obtained.

3. Mark out line of contact and remove excess *tissue.*

4. Reattach ala with atraumatic sutures.

5. Repeat on opposite side.

I. *Modelling of Base*

If too wide. 1. Separate ala along alarfacial junction.

2. Force alar rim over base until proper configuration is obtained.

3. Mark line of contact and excise excess tissue *in form of wedge.*

4. Reattach ala to base.

5. Repeat on opposite side.

Conclusion of Operation

1. Withdraw nasal packs.

2. Remove debris with sweeper.

3. Make final inspection of result. Observe (a) from above—width and curve of dorsum and shape of lobule; (b) from sides—projection, length and profile outline; (c) from in back of patient—relation of nasal elements to midline, *especially symmetry of lower cartilaginous vault;* (d) from below—size, shape and symmetry of *nares. This is best accomplished by viewing* through sterilized metal mirror held in front of nostril.

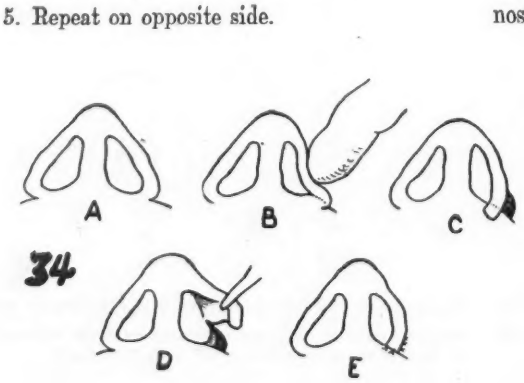


Figure 34 — Reduction of elongated alae. A, Long alae. B, Alae pressed against cheek to determine alarfacial junction. C, Ala forced beneath medial margin of wound to secure proper configuration, and excess tissue marked out. D, Excess tissue removed. E, Reduced ala reattached.

4. Correct any minor defects.

Dressing

1. Immobilize flaps of lower lateral cartilages with loose packing of vaseline gauze.

2. Paint skin surface with compound tincture of benzoin.

3. Strap nose with adhesive tape.

4. Apply stent dressing: (a) Cut flannel in form of butterfly and cover with softened stent. (b) Mold flannel-lined stent to nose. (c) Hold in place until it hardens. (d) Fix by strips of half-inch adhesive running obliquely from forehead to cheek and horizontally from cheek to cheek. Strap small pad of gauze over base of nose to absorb any oozing.

POST OPERATIVE MANAGEMENT

First 48 hours.

1. Patient flat on back.
2. Sand bags to either side of head.
3. Ice packs to eyes.
4. Semisolid diet for first 24 hours.
5. No visitors.
6. Advise against talking, laughing, etc.
7. Hands restrained at night.
8. For discomfort or restlessness, luminal 0.065-0.13 Gm., codein 0.016 Gm., or aspirin 0.3—0.6 Gm.
9. Visit patient twice daily. Note temperature, pulse and respiration at each visit. A rise of temperature of 1 degree which gradually falls within first 48 hours is of no consequence.

After 48 hours

1. Grant bathroom privileges and allow patient to walk about during day.
2. Remove atraumatic sutures (if used) on 3rd day.
3. Remove splint on 4th day. With cotton-tipped applicator dipped in benzene gradually separate adhesive. Carefully lift splint from nose. (Leave adhesive in place until 6th or 7th day).
4. Instil a few drops of hydrogen peroxide into each nostril and gently withdraw vaseline packs. Guard against pulling as it may displace the flaps. If gauze sticks despite use of peroxide, leave in for another day.
5. Remove intranasal sutures on 6th or 7th day.

The Role of Developmental Diagnosis in Pediatrics

Catherine S. Amatruda, M.D.
New Haven, Conn.

The medical care of children in the United States has made enormous strides in the past few decades. With the advent of modern principles of infant feeding, and of knowledge of mineral and vitamine requirements, infant mortality has been tremendously reduced. Serious malnutrition, rickets and scurvy are rapidly becoming medical rarities. Immunizations are controlling the communicable diseases and the antibiotics have given us a new mastery over infections. Illness still occurs in childhood, but treatment is no longer merely palliative; it is now active and specific and it is steadily becoming more and more successful. The American child is sturdier, better nourished and healthier by far than were his predecessors and than are most of his contemporaries in other parts of the world.

Lest we become too self-satisfied with this success story, it is well to recall that there still remains much to be done. We cannot claim that our children are sounder mentally, of better emotional stability and stamina than their antecedents, or that we are turning out fewer neurotics, psychopaths, mental defectives, or physically and socially handicapped individuals than in the past. Some would probably say that there are

From the Clinic of Child Development, Yale University School of Medicine, New Haven.

Presented before the 108th annual meeting, Illinois State Medical Society, May 12, 1948.

more mental and emotional deviates now than ever before. Actually, a comparative statement of any validity would be difficult to make. It is, however, certainly true that we are steadily increasing our facilities for the care and treatment of the mentally ill, the mentally defective and the criminal, or socially ill. We have in fact reached the point where we are beginning to think in terms of prevention, as well as of treatment.

And as soon as we begin to think in terms of prevention, we have to go back to infancy and early childhood. How soon can we diagnose neurological disorders, behavior disorders, and mental deficiency; what can we find out about causative factors; what part do environmental factors play? Can we identify the potential neurotic, the potential psychopath, the potential delinquent, the potential criminal? Can we so guide and protect him that his inadequacies will remain only potential, or can we in some way make him an adequate individual? What part do disease and injury play and what can we do to lessen the possibilities and the effects of disease and injury?

Any preventive program must ask these questions and we cannot assume we have the answers without investigation. We cannot assume, for instance, that all abnormalities and inadequacies are acquired, though we see many that are. Such an assumption leads to absurdities, such as prolonged psychotherapy of the mentally defective child whose behavior defects are mistakenly assumed to be due to emotional conflicts. Nor can we assume that all abnormalities and inadequacies are inborn and inherent in the individual, though we see some that would certainly seem to be so. Such an assumption leads to a fatalistic, defeatist attitude that is wholly unwarranted when we stop to consider the gaps in our knowledge. Recent recognition of the effects of maternal rubella on the fetus in the early weeks of gestation, has made it opparent that not all congenital abnormalities are due to defective genes; some are acquired. Medical science is based on facts, and assumptions are not facts. We must go on asking questions and looking for answers.

In our investigations into some of these questions at The Clinic of Child Development at Yale University, we have begun with the problems of diagnosis. We have developed a technic of examining the infant and young child which we call *developmental diagnosis*, much as physical diagnosis is based on the standard physical examination; it is used in conjunction with, or as a supplement to the physical examination.

Developmental diagnosis is an inclusive term: it includes first, diagnosis of the maturity status of the child, — how well he is developing for his age, and what his developmental potentialities are; second, neurological diagnosis of the integrity of the central nervous system, exposing defects and damage; third, diagnosis of the personality structure and emotional stability of the child in relation to his life experiences; and fourth, evaluation of his life experiences including the important parent-child relationship. The developmental examination is an examination of the childs' behavior, in terms of his age, his physical equipment for behavior, his personality make-up and his life situation. To the child the examination is a play period, to the physician it is a formal diagnostic procedure with a valuable yield in his knowledge of his patient.

The examination assays the four major fields of behavior; motor behavior, language behavior, adaptive behavior and personal-social behavior. In the motor field we observe, depending on the age of the patient, how the infant holds his head, his ability sit, to reach, grasp and manipulate, to creep, walk and run. And we determine not only whether these abilities are normally developed for his age but also whether they are normally performed. The simple act of grasping a small cube, for example, is achieved on contact, that is, if the hand happens to fall on the cube, at 20 weeks of age in the normal infant. The grasp is precarious, the hand grips in a paw-like manner with the ulnar side of the hand. At 24 weeks of age the infant grasps on sight; he sees the cube, brings both hands to it, and grasps it with one hand, gripping it in a paw-like manner with the whole hand. At 28 weeks of age, he approaches the cube with one hand, suppressing the movement of the other arm, and grasps it in a paw-like manner with the radial side of the hand. At 36 weeks of age he grasps it with his radial fingers, the thumb opposed. This example serves to illustrate the developmental process in the fine motor field, how it can be traced and followed, how it can be related to age, and how the normal patterns can be identified. It follows that disorders affecting

motor power, muscle tonus, and motor coordination are equally readily identified. Abnormal posturings and movements take on neurological significance.

Language development is also investigated in the course of the developmental examination, — smiling, cooing, laughing, syllabic vocalization, jargon, words, sentences, and comprehension of gestured cues and verbal directions of graded complexity. Language behavior also has a developmental patterning closely identified with age. An early differential diagnosis between the retarded child with concomitant retarded speech development, and the deaf child who is failing to develop speech is not difficult to make. Speech defects due to tensions and pressures are differentiated from those due to organic causes, which will have impaired coordinations of the muscles involving speech and other evidences, perhaps very slight, of neuromotor disability.

In the developmental examination we also observe the child's abilities in the adaptive field of behavior, his manner of adapting to objects and problems in his environment. Does he simply stare at objects, can he grasp a proffered toy, does he play with his hands, does he combine two playthings, put objects in and out of a container, build, copy, do play-tasks of graded complexity? The normality and relevance of his interests and exploitations are appraised and evaluated, always in terms of his age. And the exploitive behavior of the normal child, even in infancy, "makes sense," with consistent evidences of relevant interest and relevant sequences of interest. The child who stares into space, wanders about, diddles aimlessly, and so forth, is displaying serious symptoms that require diagnosis.

We also appraise the development of the personal-social field of behavior, by which we mean the child's personal responses to other people and to the culture in which he lives. Does he recognize his bottle, discriminate strangers, wave goodbye, drink from a cup, ask for the toilet, play cooperatively with other children? Does he want to do things for himself, does he want to "help"?

In each of the four behavior fields, we have cited examples of progressively more mature behavior, to show in brief what is meant by the progressions of behavior, of behavior development. These progressions are determined by maturation and constitute the basic process of growth. The normal child goes through the process of growth in a lawful, orderly manner, moving from simple to more complex behaviors, to still more complex behaviors, integrating and incorporating his abilities as he goes along. Sitting before standing, standing before walking, syllables before words, words before sentences.

The examination is not difficult to administer, as most children are extraordinarily open to approach. Put the child at his ease, then offer him a toy and he will exploit it with all his maturity. Put a toy beyond his reach and he will use his locomotor capacities to the full to obtain it, vocalizing his protests and his satisfactions. In fact, it is the child's accessibility and naivete that enable us to assess many factors in his personality make-up. We observe how he makes his adjustment to the examination situation, which is, I should explain, so planned and devised that it is normally an easy and pleasant experience for the child. We note whether he is inhibited, anxious or fearful; whether his adjustment is facile or accrues very slowly; whether he clings to his mother or goes too readily to the examiner. Perhaps his emotional responses are unpredictable, with outbursts of silly laughter. Or he may be the normal well-adjusted child who meets new situations with self-confidence, sustained interest and enjoyment. And it is surprising to discover how consistently, on repeated examinations, the same child will respond in the same way. We watch the mother, too, for evidences of detachment, coldness, rejection, over-solicitude, too close identification with her child, over-emotionality, or of normal wholesome acceptance and enjoyment.

The child's experiences too, need assessment and evaluation. We must know whether this child is in his own home, wanted and loved, or whether his home is discordant, unhappy, abusive, alcoholic. If he lives in a foster home he may be merely tolerated, or he may be an integral part of a warm family unit; perhaps he has lived in a series of foster homes, never long enough in any one to put down roots and become a part of it. Or he may have had a long hospital or institutional stay, with long monotonous days and few socializing experiences. His medical history

may have a very profound effect upon development; we may be dealing with the sequelae of some serious illness such as meningitis.

This introduction has served to describe the developmental examination, which is the tool we use in diagnosis. Its diagnostic scope and precision determine in large part its usefulness, though much depends on the experience, clinical insight and skill of the operator.

It is not possible in this brief time to describe all the conditions that are encountered in clinical practice, all the behavior deviations, all the neurological disorders. A condition in which we have been much interested, namely minimal cerebral injuries in infancy, will serve to illustrate some aspects of infant neurology.

Frank cerebral palsy with its crippling spasticity and athetosis is recognized without much difficulty. There is a recent new impetus toward improved and expanded facilities for the treatment, rehabilitation and education of this handicapped group. The child with a minimal injury, however, is usually undiagnosed or misdiagnosed. His handicaps go unrecognized or misinterpreted.

The clinical picture in the first year may be quite striking. The birth history may be entirely normal, but a history of excessive jitteriness or somnolence and of poor sucking in the neonatal period is frequently encountered. Feeding difficulties may persist for months and may be the presenting symptom. Choking and gagging are particularly prominent and are due to faulty coordinations in swallowing. Strabismus of varying degrees of severity is almost universal. A unilateral facial weakness or a generalized loss of facial tone with blanking out of facial animation is not uncommon. Head control is usually good but arm and hand posturing tend to be abnormal. Quite commonly the arms are extended laterally at shoulder level with small athetotic movements of the fingers. Prehensory approach and grasp may be very distorted and defective and may even be almost completely replaced by head reaching, or by manual touching, poking and fingering, or by foot exploitation. Sitting is commonly delayed because of the tendency to adductor spasm, which produces what we call "narrow base sitting", an untenable position for the young infant. Even slight hyperactivity of the hip extensors will displace the line of weight-bearing posterior to the buttocks, another untenable position. Tonic plantar flexion of the toes is also seen. Muscle tone may be very uneven with weakness of the upper trunk and shoulder girdle, hypertonus of the legs. Excessive startling is frequent and the deep reflexes are hyperactive.

This is the full blown picture in infancy, the picture which tends to evoke erroneous diagnoses of gross mental defect. In other infants the clinical picture is less well developed, the motor signs more subtle, and more apt to be overlooked.

These motor signs happily tend to amelioration in the second and third years. Prehensory approach and grasp make their appearance sometime between the 10th and 15th month, sitting and creeping are finally achieved. Independent walking may be delayed to beyond 20 months and tends at first to be a little stiff, awkward and propulsive. Manual skills are very variably developed; the same child may be quite skillful and adept with his fingers, but unable to feed himself because of inadequacies in the complicated coordinations required for this particular skill. Speech defects due to poor labial, lingual and pharyngeal coordinations are common and drooling may persist well into the 3rd or 4th year. Lax perioral muscles may be seen long after general facial tone is fairly good.

The tendency to resolution should be emphasized; the motor signs gradually become so subtle as to almost defy recognition by the time the child is 5 or 6. There are, however, residuals. Really good coordination is rarely achieved. This is not the material from which good athletes are developed, nor does the injured child ever become really expert in such special skills as piano playing, typing, sewing. Drawing and handwriting even in later years often furnish clues.

The intelligence, so-called, tends to be good, in spite of the very abnormal developmental course in early infancy. We do, however see an occasional retarded child with residual minimal signs. Personality disorders of varying severity are by no means uncommon. Children with minimal cerebral injuries are often explosive and obsessive. They tend to have poor emotional control with exaggerated tantrums; they sometimes have bizarre fears. In rare instances, convulsions become a serious complication.

Recognition of the underlying organic basis for the behavior abnormalities will bring about wiser and more understanding management of the

so-called behavior problems these children present. Certainly they should not be considered disciplinary problems; they should be regarded as evidences of faulty coordinations in personality development. Under sympathetic guidance and management the tendency in the personality field, as in the motor field, is toward resolution and amelioration.

A survey of 100 supposedly normal infants seen at our clinic, revealed six with evidences of minimal injury. There is no autopsy evidence to substantiate our hypothesis that an injury has been sustained. The diagnosis is presumptive; it is based on the high incidence of neonatal symptoms, the organic nature of the neurological signs in infancy, the obvious gradations into frank cerebral palsy that are seen, the normal family history and the normality of the siblings.

The Constitutional Emotional and Cultural Factors Producing Mental Deficiency

Hans Neuer, M.D.
Lincoln State School and Colony*
Lincoln

The problem of mental deficiency was formerly approached in three main avenues: by neuropathology, by eugenics, and by intelligence tests. Intelligence was assumed to be a special faculty localized in the brain cortex, and mental deficiency a disease entity due to brain pathology for which in 80% of cases hereditary, recessive factors were blamed as causes, according to Goddard and Tredgold. The over-evaluated IQ became the decisive factor in the classification and final diagnosis of mental deficiency. This concept of intelligence and mental deficiency is untenable in the light of modern psychology and genetics.

The personality of the mental defective as that of any other human being can be understood only if the individual's life experiences with all constitutional and environmental factors involved are investigated. In other words, we must apply the methods of psychobiology to the study, treatment and prevention of mental deficiency. We must cease to conceive the mental defective as a carrier of a brain pathology disregarding entirely his environment. We must look at the syndrome of mental deficiency as an abnormal reaction pattern of the organism as a whole.

All behavior disorders, neurosis, psychosis and mental deficiency can be brought to a common denominator, that is, loss of efficiency. A normal individual shows the ability to gain the right balance between satisfaction of one's egoism and the fullfilment of social obligations, which balance assures his existence without coming in conflict with, or in dependence of the community. Behavior disorders result from a deficiency of either or both of an individual's competitive and cooperative tendencies. In a minor or major psychosis, it is the ability to cooperate at fault whereas in mental deficiency the impaired ability to compete with the other members of one's social group becomes primarily recognizable. A minor or major psychosis is characterized by a pronounced digression of emotions. Mental deficiency is conventionally defined as an arrestation of the intelligence before the individual has reached the socalled physical maturation. Psychological deficit which becomes apparent after a normal development

---

*At present, Agnews State Hospital, Agnew, California.

Presented before section on Physicians' Association, Department of Public Welfare, Illinois State Medical Society, 107th Annual Meeting, Chicago, May 12-14, 1947.

of intelligence and after puberty is called dementia.

The structure of personality depends on an inherited potentiality to react and on the differentiating forces of an environmental stimulation. Either one might be at fault and cause that form of social inadequacy which manifests itself as mental deficiency.

In the last one hundred years medicine was very much impressed by the revelations of biology, Virchoff's cellular pathology and later on by Mendel's famous investigations of heredity. No wonder that psychiatrists were inclined to hold heredity as etiology for many behavior disorders and especially in familiar cases where no structural or physico-chemical anomaly could be detected.

At present, it is impossible to prove directly the inheritance of mental traits. Only in such cases where abnormal mental traits are constantly associated with the same observable organic signs, is it possible to calculate a probability of an inherited etiology.

The great majority of all mental defectives, the socalled familial type included, shows no structural physico-chemical peculiarity, and most of the organic cases allow no conclusion of an inherited etiology. Of three hundred admissions at the Lincoln State School and Colony, only five cases exhibited organic stigmata similar to those reported in the history of other family members of the patients. If we consider that the percentage of the organic cases of institutionalized patients is much higher than among the mental defectives in the general population, one must infer that only about one-tenth percent of all mental defectives can be suspected of having inherited the disorder. But even in Friedrich's Disease, familial and amaurotic idiocy, Laurenc-Biedl syndrome and phenyl-peruvic oligophrenia it is very difficult to reckon the Mendelian ratio. If we realize that most of this familial and heredodegenerative types of mental defective are sterile idiots, the fear that the human race could biologically deteriorate because of a steady increase in the procreation of mentally handicapped children is without foundation. The role of eugenics in the prevention of mental deficiency must therefore be considered of minimal importance. The rarity of incidents where an inherited etiology might be taken into consideration makes it necessary to search for environmental causes in order to learn their genesis and find the right ways to treat and prevent mental deficiency.

There are two ways by which environment might produce behavior disorders, that is, by organotrope factors which strike single organs, and by psychotrope factors which affect the organism as a whole. Organtrope factors which produce structural or physico-chemical pathology are infections, mechanical traumas, and such causes which result in malnutrition, disfunction of metabolism and of endocrine glands, etc. These factors might arise in intra-and extra-uterine life and leave the more serious consequences the earlier they arise and the longer they last. The imprints of these noxious factors produce a constitutional incapacity to respond to subsequent normal stimuli of the environment.

The syndrome of mental deficiency might occur if the organism has lost the specific capacities to perceive or to conduct stimulation, or if "physical" illness inhibits the experience of those stimuli which enable the individual to cope with changing life situations. Any long lasting ailment which deprives the child of the normal environmental stimulation interferes with the normal rate of intellectual development even if the nervous system was not primarily at fault.

Among 300 new and readmissions were 118 or 39.3% "organic" cases, 50% of them were not older than 6 years, and 25% not older than 3 years. All admitted children up to 3 years were idiots of the "organic" class.

That does not mean that the same proportion is to be expected among the general population. Because there has always been relatively many more organic cases committed than the other types, this figure contrasts with the statistical data of 1943 which reported that about 20% of the total institutionalized population were of the organic type. To explain this discrepancy is to say that the commitment of organic mental defectives born in better economical layers of the general population, apparently has increased in recent years, because the traditional fear to have mentally and physically handicapped children confined in state hospitals appears to dwindle. The reasons are that emotional disturbances and embarrassment in the home of the mental defective child becomes often relieved after the sibling has been confined to an institution. Furthermore, the custodial and medical care for organically

handicapped children can be carried out in a more appropriate and economical way in a state hospital than in a private home.

Another reason to explain the difference of the percentage in the general population in 1943 and the percentage among the new admissions is the higher mortality of the organic cases. Between January 1945 and December 1945, there died 19 of the 118 organic and only one of the 182 other cases, and that was a suicide.

Psychotrope factors which elicit abnormal responses of the organism-as-a-whole are: Deprivation, frustration and overstimulation.

Cognitive functions are recognized in neuromuscular activities, in adaptation, inter-personal relations and in language. The prerequisit for these functions is a normal "physical" constitution. The development of intelligence, however, needs also an adequate environmental stimulation as a physically well developed child will exhibit a stunted intelligence if its constitutional capacity to respond has no chance to operate.

The home offers the child the first stimulations, arouses the first sensations, and conveys its first experiences. In the pre-school age it is the home which must lend to the growing child all possible opportunities to learn. Yet the child's intellectual horizon cannot expand further than the cultural limits of the home. The family gives the fundament upon which all later acquired knowledge is built and accrues. In the home the mother, or her substitute dominates the relations between the child and the field of environment. Her cultural background, emotional character, social attitude, moral code, and general education will reflect upon the child's behavior development. Provided the physical health of the child remains satisfactory, its behavior depends, during the first year of life, mostly on the emotional equilibrium of the mother. Later on, the mother's cultural inheritance and intelligence becomes an additional formative factor for its behavior. The mother, and to some extent the father, and other members of the family, and even servants, etc. determine the pattern of the child's behavior.

Conflict between parents, and economical worries might upset the emotional poise of the mother. Her irritation and anxiety, however, will pass over to the child and influence its responses, its social attitude, and morals. A disappointed, divorced, or deserted wife seeking compensation of the husband's lost love might indulge in her child — especially if it is the only one — with the result in raising a child who never will learn to consider its fellows' interests or who never will recognize any authority and might never become independent. Witnessing the parental quarrels, the child might become induced to side with either one of the parents. That might provoke further complications as rejection or hate by either parent or too much pampering by the other one. If harmony fills a family life the child will learn unequivocal rules for its orientation of life, its moral will be firmly established. If discord irritates the family peace the child will feel insecure and its concept of the world will become hazy and problematical, its behavior becomes antisocial and in some cases "allergic" to any authority. To all these abnormal family constellations, the child finally might react with anxiety, antisocial tendencies or withdrawal from contact with the environment. If this condition lasts too long, children will develop signs of a psychopathology, they might become deprived from normal environmental stimulation and consequently from the opportunities to learn, and their intelligence eventually will become deficient.

Sibling rivalry also might cause severe emotional disturbances of the growing child. Physical deficiency and the painful recognition of the inability to compete with healthy children might give rise to an inferiority complex with subsequent emotional digression: Long lasting physical ailments might induce parents to spoil a child with the result of raising a so-called problem child. Long lasting disorders due to either organotrope or psychotrope or both factors must eventually bring about an impairment of intelligence or mental deficiency. Charles Bradley writes that if an illness interrupts the development of a child even temporarily, the patient appears to have lost ground with his fellows who have gone ahead. That is true for "mental" and "physical" illness alike.

The obvious intellectual inadequacy in many neurotic and psychotic children is therefore, the result and not an underlying cause of a minor or major psychosis in childhood. This conclusion has not yet been commonly recognized and accepted for many reasons. Childhood psychiatry is a relatively new discipline and remains generally a domain of university clinics. The general practitioner who meets problem children

with signs of mental deficiency contents himself with neurological examinations and requests for intelligence tests. The too much worshipped intelligence test induces to neglect any further behavior analysis. Once a child scores a low IQ, it is usually classified as feebleminded without further attempts to apply other personality studies.

There is a large group of mental defectives with neither pronounced organic stigmata nor a history of a minor or major psychosis. These persons became intelligently handicapped primarily by a cultural deprivation and represent the Simple or Subcultural Type of Mental Deficiency. Of paramount importance, for the final development of intelligence are the first three to four years of life. During that time the child learns to associate concrete experiences with symbols, interpret and reproduce words; the child develops its linguistic habits — it learns to talk. The more opportunities are offered in the home to perceive, to see, and experience the greater will become the child's capacity to recognize, to generalize, to abstract and later on in school to comprehend. A correlation between the parents' intelligence and ethics becomes gradually noticeable — the older the child grows. The ignorance and negligence of the parents, dearth of appropriate stimulation, complicated by economical shortcomings, all these interfere with the intellectual development of the child.

Abnormal structural, emotional and cultural factors are instrumental in the production of the syndrome of mental deficiency. Disregarding the cases of "organic" idiocy, there are relatively few cases in which only one of the aforementioned etiological factors might be blamed for the pathogenesis of mental deficiency. Most cases have a mixed etiology. Many children become neurotic because of some physical handicap and very often are the emotional disturbances complicated by the cultural inferiority of the home atmosphere.

For the purpose of diagnois, however, and effective treatment, all mental defective types should be classified and treated in respect to the most pronounced deviation. Consquently, we might distinguish two main classes: one with prevailing "organic" pathology due to organotrope factors and one class without marked organic stigmata due to psychotrope factors. The second class comprises a Neuro-psychotic type with a history of a minor or major psychosis and the Simple type, with neither organic nor neuro-psychotic signs. In the aforementioned survey, there were 28.3% of the Neuro-psychotic and 32.4% of the Simple types. Among 161 morons were 11.2% Organic cases; 40.9% Neuro-psychotic cases and 47.9% Simple cases. 92.4% of the Simple morons came from poor economical conditions. Almost all of the cases which are labeled as "familial" or "undifferentiated" types, are socially handicapped victims of an unhealthy family atmosphere which is the consequence of low cultural and social economical conditions.

It is obvious that patients with outstanding neurological or other organic disturbances require a different treatment than socially handicapped morons. The care of mainly physically disabled patients must consist of hospital treatment and custodial care. Persons with little or no organ-pathology should be moved to homes or institutions where individual academic training, personality studies, rehabilitation or psychiatric treatment can be carried out.

BIBLIOGRAPHY

1. Bradley, Charles, Schizophrenia in Childhood. The Macmillan Company, N. Y. 1941.
2. Chess, Stella, The Decisive Influence of Parental Attitudes. The Nervous Child. Vol. 5, 1946.
3. Friedlander, Dorothy, Personality Development of Twenty-Seven Children Who Later Became Psychotic.
4. Goldfarb, William, Effects of Psychological Deprivation in Infancy and Subsequent Stimulation. A. J. of P. July 1940.
5. Jersild, Arthur T., Emotional Development In The Manual of Child Psychology, edited by Leonard Carmichael. John Wiley and Sons Inc., N. Y. 1946.
6. Kanner, Leo, Child Psychiatry. Charles Thomas. Ill. 1942.
7. Kanner, Leo, Behavior Disorders In Childhood. Personality and the Behavior Disorders, edited by G. J. Mc.V. Hunt. The Ronald Press Co., N. Y. 1944.
8. Maslow, A. H. and Mittelman, B., Principles of Abnormal Psychology. Harper and Brothers. 1941.
9. Marcotte, T. E. Alexander, "Mental Deficiency In Behavior Problems." 70th Annual Meeting, Am. Ass. on Ment. Def. 1946.
10. National Committee for Mental Hygiene. Statistical Manual for the Use of Institutions for Mental Defectives. 1941.
11. Neuer, Hans, Modern Concept of Heredity, Ill. Med. Journal. March 1947.
12. Neuer, Hans, Prevention of Mental Defectives. 70th Annual Meeting, Am. Ass. on Ment. Def. 1946.
13. Penrose, Lionel S., Mental Defect. Farrar and Rinehart. N. Y. 1934.
14. Pollak, Horatio, Mental Diseases Among Defectives. A. J. of P. Nov. 1944.
15. Rosner, Albert A., The Sequelae of Encephalitis.
16. Sjorgrer, J., Untersuchungen ueber die Heredotaxien. 1943. Reviewed by J. W. MacArthur, Toronto, in the A. J. of P. Jan. 1946.
17. Stoddard, George D., The Meaning of Intelligence. The MacMillan Co. 1943.
18. Tredgold, A. J., Psychological Medicine. The Williams and Wilkins Co., Baltimore. 1943.

DISCUSSION

Dr. Louis Belinson, Dixon:

I was fortunate in that I had the opportunity to read Dr. Neuer's paper previously and could study some of the thoughts that he has presented, which type of thinking is quite prominent now in the literature. We are beginning to become somewhat more concerned about cultural and hereditary factors in the care and treatment of our defectives.

One must always consider the viewpoint when attempting to evaluate any particular thesis. I recall in my own experience that when I transferred from Lincoln up to Elgin a number of years ago, I couldn't agree with their interpretations of psychotic reactions in defectives who came to Elgin because they were psychiatrically oriented and their thoughts and ideas made the defective appear different.

At Lincoln we seem to attribute many of the behavior deviations to their defectiveness rather than considering it a problem of psychosis, and just the opposite prevailed when I came to Elgin. So when we attempt to be critical or evaluate critically, we have to be sure we are on the same ground.

Dr. Neuer presents a new classification. Every classification has defects. Yet the fact that within our institutions for the defectives we have individuals who are reading, thinking, and attempting to work out new classifications, it is in itself a most praiseworthy effort.

He handicapped us somewhat here by not completely describing his neuropsychotic type. He mav do that before he closes. I think it might help all of us.

In our own studies we didn't find so many whom we would call psychotic or neurotic prior to coming to the institution. Perhaps we didn't use the same criterion as he does. Many of the men who are now writing in this field — and recently several papers have appeared — stress heredity. I am sure Dr. Neuer doesn't feel that we should dismiss this but he tends to emphasize the cultural effect on the development of the individual's intellectual capacity.

Halperin in a recent article has shown that eighty per cent of individuals whom he studied and who were feebleminded with conditions associated with neurological disorders were idiots and imbeciles. Yet seventy per cent of the parents of this group were of normal intelligence, and it is quite well known that the lower scale defectives are more apt to be found among the more intelligent parents.

Then in a group free from physical and nervous diseases, he found thirty-one per cent of the parents defective and only eight per cent normal. Incidentally, he presents a good thought; since we are concerned with intelligence, should we consider an imbecile as being intelligent?

Perhaps, from the standpoint of studying heredity, we should consider intelligence only starting with the moron. We can take that for what it is worth. Myerson in a recent article in the November Journal of Psychiatry also stresses the fact that the heredity factor is very important, and he thinks it is probably the most important when you exclude organic factors. He finds that in school examinations of some 3500 children, seven per cent of them had one or both parents mentally defective.

As to the question of psychometric evaluation or IQ, I am sure that our present trend is away from past over-emphasis. More thought is being given to social patterns and projection techniques and I think it a wholesome trend, and it isn't giving us the concern that it did.

In evaluating data, such as Dr. Neuer presented, it may be well to present some of the figures from the Dixon State Hospital, because there has been a marked change. There has been a change in the type and character of admissions, and your statistics have to be interpreted in the light of that change.

In Dr. Neuer's group of the 300, 150 were under six years of age chronologically. One-half of them then were babies. That is a trend far different from what has been in the past. Unless that is realized, your statistics can't be interpreted properly. I checked over the year 1946 for the Dixon State Hospital and found the following data. Of the 420 admissions of feebleminded patients, not including the epileptic nor postencephalitic, we received patients ranging from eight days of age to sixty-five years of age. There were twenty-one under one year of age. There were 122 who were six years of age and under, comprising thirty per cent of those admitted during the year, whereas the nursery age group runs around four or five per cent in the institution, so you can see the admission rate of this group is entirely out of line with what we have been having.

The mean age of the 420 patients was fifteen, chronologically, whereas the mean age in the institution is twenty-seven. We can see the significant trend towards earlier admissions, and probably it accounts for the acute problem of taking care of the number of babies that have been committed. I mention this as it must affect the statistical evaluation because groups of babies surely would not fit into the subcultural group that Dr. Neuer stresses.

I feel it a privilege to have been able to read Dr. Neuer's paper previously, and to present these thoughts and comments to you.

Dr. Herman Josephy, Chicago: I enjoyed Dr. Neuer's paper very much and I agree with many of his ideas. However, I do not agree with his title and his basic conception. I think it is necessary to emphasize this point.

Neither emotional nor cultural deviations cause feeblemindedness. A child living under emotional stress may give the impression of being mentally retarded. Actually he is not. He lives and acts in

an emotional stupor, and that means something basically different from feeblemindedness. A child lacking education — the term used in its broadest meaning — is not feebleminded either. He is uneducated, and has grown up more or less as a savage. This topic has been discussed extensively in Europe 150 years ago.

If Dr. Neuer had discussed the problems from the point of view: are we doing enough for our feebleminded patients, and do we give them adequate psychiatric treatment and guidance, and a satisfactory and appropriate education — I think that all of us who have worked in institutions for the feebleminded, should feel guilty. We do not enough. Not always we get out from the inmates, especially from those on the higher levels, what one could get out. There are those who are classified as morons on account of some testing and an I.Q., and are institutionalized for years and even for lifetime. Mostly too little attention is paid to the fact that emotional and cultural deviations may impair their performance and still less is done to treat and make up for such deficits.

We know that there are quite a lot of people who according to their performance in tests are morons or even lower. However, they live outside of institutions and make a living as untrained laborers or so and do not become criminals either. I feel that institutions for the feebleminded have a number of inmates who could do the same. Making such patients fit for life by treating and repairing their emotional and cultural deviations is a worthwhile task. Probably this would be an important step against overcrowding too.

To repeat! neither emotional nor cultural deviations cause feeblemindedness. However they may put such a load on a child of average intelligence that he apparently is mentally defective. Furthermore these factors may impair essentially the performance of those who actually are mentally retarded. The assumption that such deviations cause feeblemindedness, is not justified and shifts the problem on the wrong track.

Dr. Neuer: I am very grateful for the constructive criticism of my discussants.

As to the remarks of Dr. Belinson I think there is some misunderstanding. I did not say that every patient committed as a mental defective was psychotic or neurotic at the time of admittance. I state however that there are many high grade mental defectives with a history of a psychosis and neurosis. Dementia praecoxissima is supposed to start before the age of three. It is clear that children who show a longlasting emotional digression in the early youth cannot reach a normal level of intelligence. The clinical picture of a neurotic child is characterized by vomiting spells, restlessness, night mares, tempertantrums, stuttering etc. I would not classify a child as neurotic if it should exhibit only one single abnormal trait. If a number of these symptoms are formed then we are right to take them as signs of anxiety. If that anxiety lasts too long it must reflect finally on the intellectual development. In other words emotional disturbances may produce mental deficiency.

I am aware of the fact that there have been articles recently published which emphasized the inheritance of mental traits. I think we have to go into semantics to find a satisfying answer about how heredity and mental states are interrelated. The words "heredity" and "mental" refer to different concepts. Heredity is a biological process which takes place in the cells, chromosomes. Mental deficiency, psychosis and neurosis are behavior disorders. Neurologists and biologists deal with concrete observable facts or events, whereas psychologists deal with more or less accurate descriptions of human responses. It is very hard to explain or define any mental phenomenon, because we cannot break down concepts of personality, e.g. jealousy, anxiety, to such a primitive level of conception understandable to all people in the same manner. The psychologist deals generally with quantitative deviations; the pathologist deals more with qualitative deviations. Thus it is very hard to bring both deviations to a common denominator. There is no sure way of proving inheritance of any mental traits except in cases where certain mental traits are always associated with the same organic signs.

Dr. Josephy denied that emotional factors might produce mental deficiency, without giving his definition of "mental deficiency". We have many terms referring to arrested intelligence: feeblemindedness, oligophrenia, mental deficiency etc. It is a little hard to carry on a discussion especially in psychology and psychiatry unless we can arrive at and agree on a definition.

Formerly neuropathologists thought that mental deficiency was due to a disease localized in the brain cells. Intelligence was assumed to be a function of a single organ, the brain. Whereas modern psychology considers intelligence as a behavior aspect of the organism as a whole.

The main purpose of my paper was to emphasize that the professional workers who deal with the problem of mental deficiency must treat the mental defective in a different way than has been the case in the last thirty or forty years.

Mental deficiency is not only a manifestation of brain pathology, but a deviation of human behavior. We must therefore reject every one-sided neurologyzing approach to the whole problem. Thank you.

CASE REPORTS

Additional Observations In Neostigmine Therapy

Burton J. Winston, M.D.,
Waukegan

The value of neostigmine lies in conditions which are disabling as well as painful: namely, muscular fibrositis, hemiplegia, chronic rheumatic arthritis, subacrominal bursitis, poliomyelitis, *post-operative* intestinal and urinary bladder atony, glaucoma, peripheral vascular disorders and myaesthenia gravis. In addition, neostigmine (Prostigimin) methylsulfate has proven itself as a test for early pregnancy.

Case 1. R.D., male, age 12, had "an operation on his lower back at the age of eight days." His mother also stated that after the age of two, he began to lose control of his bowels and urine. A communication from the hospital revealed that his condition was diagnosed as cord bladder, spina bifida, lipoma of buttocks, sphincter paralysis, and bilateral cavus deformity of feet. On July 15, 1941 he was operated on for spina bifida with no improvement.

The patient was seen June 4, 1945 because of the increasing difficulty caused by the cavus deformity of his feet. Examination at that time revealed unusually high pitched longitudinal arches. It was evident that most of the weight was being borne on the heel and ball of the foot instead of the three usual points. He was having pain in the ball of the foot and a sense of tiredness in the longitudinal arch plus cramping in *the muscles of the calf. There was decreased* mobility of the foot and callous of the skin over *the metatarsal heads.*

Neostigmine (Prostigmin) therapy was begun on June 4, 1945 at which time he received 2 cc. of neostigmine methylsulfate 1: 2,000 solution, together with atropine sulfate, gr. 1/200 subcutaneously daily for three days. The atropine was used to eliminate unpleasant parasympathetic side effects of the neostigmine. In addition, he was given neostigmine hydrogromide tablets, 15.0 mg. after each meal plus 10 min. of tincture belladonna.

After one week of treatment, the patient showed definite signs of relief. There was no complaint of tiredness in feet and legs. He did

not complain of cramps in his legs; and stated that his shoes were "becoming too short." By the end of two weeks of treatment, it became necessary for him to have larger shoes. During this period, his mother also noted that he had better control over his urine and bowels and had not once soiled his clothes or wet his bed.

One month after beginning treatment, it was necessary to obtain a second larger pair of shoes. He could walk better and was even able to run and play. Parenteral treatment was then reduced to twice weekly, but the oral dosage was maintained. When last seen on October 19, 1945, he was progressing nicely and continued to show improvement while taking only the oral medication.

Case 2, W.W., female, age 32, was a civilian employee of a veteran's hospital. On awakening one morning she was unable to turn her head. Diathermy and massage gave her no relief.

There was exquisite pain on attempting to passively turn patient's head from side to side. There was marked spasm of posterior cervical and trapezius muscles.

Within 30 minutes after the subcutaneous injection of 2cc. of neostigmine methylsulfate 1: 2000 solution together with atropine sulfate gr. 1/100, the patient began to notice less discomfort and greater range of motion of her head and neck. There appeared to be less spasm of the cervical muscles. After three injections, at daily intervals, the patient was free from pain and had normal range of motion.

Case 3. C.K., male, age 47. While doing construction work, suffered an anterior dislocation of the right shoulder. It was reduced under general anesthesia and the arm placed in a sling. After two weeks the arm was removed from the sling, and on attempting motion at the shoulder patient experienced severe pain due to muscle spasm.

He was given 2 cc. of neostigmine methylsulfate, 1:2000 solution along with atropine sulfate, gr. 1/150 subcutaneously. He observed some improvement in approximately 15 minutes. After three injections at five day intervals, he was able to return to work free from pain or limitation of motion.

Case 4. F.S., female, age 68, gave a history of having had arthritis for the past thirteen years. Her condition had been diagnosed as rheumatoid-arthritis of the knees. During the thirteen years of her illness, she had tried many forms of treatment in an attempt to alleviate the discomfort about her knees.

On physical examination patient was found to be in good general condition for her age. Her knees showed the typical changes of rheumatoid-arthritis and there was a moderate degree of muscle spasm posteriorly. During the past four years of her illness she was unable to walk a distance of two blocks because of the pain in her knees. Following the first injection of 2 cc. neostigmine methylsulfate 1: 2000 solution along with atropine sulfate of 1/200, she was able to walk with greater ease. And for the first time in four years walked a distance of two blocks. The parenteral medication was supplemented by neostigmine hydrobromide,15.0 mg. after meals and 10 minims of tincture belladonna. The injections were given every four days for six weeks, after which time she discontinued treatment. Two weeks later, the patient was unable to get out of bed because of the "intense stiffness" which she described about her knees. The injections were resumed. After the second injection she was able to get out of bed, and after the fifth (given every three days) she was again able to carry on her household duties.

After four months, treatment was reduced to weekly injections which the patient is still receiving. She has now been on neostigmine orally and parentally for two years with no signs of toxicity. Except for occasional "bad days" she is relatively free from pain.

COUNCIL MEETING MINUTES

August 29, 1948

The regular August meeting of the Council was held at the Palmer House on Sunday, August 29, with the following present: Stevenson, Camp, Hughes, O Neill, Stone, Hawkinson, Vaughn, Hedge, Saunders, Blair, Peairs, Norbury, Hulick, English, Otrich, Hamilton, Coleman, Neece, Furey, Hutton, Cross, John W. Neal, James C. Leary, Tom Jones, John A. Rogers, and Frances Zimmer.

The minutes of the June 6th meeting were approved.

The secretary read his report dealing with several items for Council consideration. (1) Michigan has adopted a "Prior to Primary Day", September 14, on which each of their Councilors hold a meeting, inviting the president, secretary, Chairman of the Legislative Committee, and the family physicians of congressmen and legislators to develop a program of personal contacts with all candidates for state or national office. This plant is offered for council consideration.

(2) The approval of the resolution introduced by E. S. Hamilton, dealing with the selection of the outstanding general practitioner for the A.M.A. annual award, was given by the A.M.A. House of Delegates. Notices have been sent to all county societies asking that they send in the name of the physician from their county whom they wish to have considered for the Illinois candidate. The Council should authorize the chairman to appoint a committee to judge these county nominations and select the representative for Illinois. Then the material can be prepared by our public relations counsel in a form suitable for presentation to the A.M.A.

(3) The Council should consider issuing an automobile emblem for members of the society. Several requests have been received asking for such a service on the part of the state society. Shall we have metal emblems which can be purchased, or stickers which can be furnished with membership cards?

A request was received from the Bureau of Accident and Health Underwriters, New York, that 100 copies of our booklet dealing with the Illinois Plan for prepaid medical and surgical care be sent to them for distribution. A letter acknowledging receipt of the material has been received, but we have not had any inquiry from any of the companies involved to date.

MOTION: (Hamilton-Vaughn) that the report of the secretary be received and made a matter of record. Motion carried.

Hedge stated that there were three items outlined in the secretary's report which required action:

(1) The consideration of instigating a "Prior to Primary Day" such as has been done in Michigan for September 14.

English: Too late for any such action this year. The matter might be considered in the future.

(2) Stevenson stated that the Executive Committee had a definite recommendation to make relative to the selection of the outstanding general practitioner in Illinois, to be the candidate for the A.M.A. award to be given in St. Louis. The executive committee recommended that the chairman appoint a committee of five, none of whom should be members of the Council, to select the candidate from Illinois, after examining all recommendations to be made by the various county societies. This

candidate from Illinois will receive a suitable certificate and medal from the State Society regardless of whether or not he is awarded the A.M.A. honor. The Committee so appointed will have power to select the candidate and the certificate and medal will be presented at the annual dinner of the state society.

MOTION: (Stevenson-Neece) that the Council concur in the recommendations of the Executive Committee. Motion carried.

(3) MOTION: (English-Otrich) that the secretary ascertain the price of 50,000 automobile stickers to be distributed to members, and report at the next meeting of the Council. Motion carried.

Stevenson reported on a letter received from Hopkins in Hawaii, mentioning several important items for Council consideration. The dinner for the members of the A.M.A. House of Delegates held at the Saddle and Sirloin Club during the A.M.A. meeting was a definite success and an excellent public relations gesture.

Dr. Hopkins also wanted to report to the Council that a new contract had been signed with the Veterans' Administration in the program to supply medical care at home for veterans with service-connected disabilities.

Dr. Warren Furey reported as Vice-Chairman of the Committee on Voluntary Prepayment Plans for Medical and Surgical Care. The committee met on August 3, and at this meeting, approved an overall policy issued by the Metropolitan Casualty Company of New York, pending action on the part of the Department of Insurance of the State of Illinois, and a final check by the general council.

The Bankers Life and Casualty Company of Chicago was taken off the approved list by committee action.

A special organization embodying representatives of those states where an indemnity plan is in operation, of where such a plan is contemplated, is being formed. The group of some eight state representatives met during the A.M.A meeting, then met again later that week with representatives of the A.M.A. Council on Medical Service. This summer a meeting was held in Madison, Wisconsin, which was attended by representatives of Illinois and Wisconsin, plus Howard Brower of the A.M.A. Council. This group suggested a name for the new national organization, "The Conference of Medical Society Prepayment Plans", and the state society committee has requested approval from the Council to participate in this national organization, and also to become a part of the setup.

MOTION: (Hughes-Hawkinson) that the Council approve the report of the committee and approve the participation in the "Conference of Medical Society Prepayment Plans". Motion carried.

Dr. John A. Rogers, Director of the Illinois Division of the American Cancer Society, and Tom Jones, medical artist, appeared before the Council bringing a working model of the contemplated exhibit of the American Cancer Society to be installed in the Museum of Natural Science in Jackson Park. The total cost of the finished exhibit will be some $50,000 and before further work is done, approval of the Council is desired.

The exhibit will be the finest of its kind in the world, and will depict the state of Illinois, the city of Chicago, and by graphic lights, will show: resources for the control of cancer (physicians, information centers, detection centers, cancer clinics, etc.) The exhibit must give specific information to be of value, and the Illinois Division desires approval of their contemplated plan to give the actual names of cancer clinics and the means of making use of these facilities. Some $800,000 has been made available to the Illinois Division for this year's work.

MOTION: (Hamilton-English) that the Council approve the plan as outlined by Doctor Rogers and Tom Jones. Motion carried.

Stevenson reported as President-elect stating that the Illinois Society for the Prevention of Blindness has established a program in Illinois which will include the screening of all school children for eye defects. This screening test is to be established on a standard basis of testing, and the Society wants two ophthalmologists and two optometrists to perfect the program. The Council should approve the services of these two ophthalmologists and also approve the contemplated program.

MOTION: (Stevenson-Neece) that the Council approve this proposed program pending an investigation by the president-elect, and that the Council sanction the appointment of two ophthalmologists to serve on this committee. Motion carried.

Stevenson discussed the use of county health units to give free care in prenatal cases, and in many other fields of medicine — whether the patient is able to pay for such care or not. He felt that the Council should go on record stating that adequate prenatal care in the office of a private physician is not denied to anyone, and that the county societies should oppose any such action on the part of a health center. The Department of Public Health and the local units will not participate in any such program unless it is approved by the county society, and the county societies should be informed that the Council of the state society has expressed adverse opinions relative to this type of work. Such an expression on the part of the Council gives the county society something to "back them up" when approached along these lines by any lay group.

MOTION: (Stevenson-Hawkinson) that the Council concur in this opinion, and that a letter be sent to each county society secretary giving this information. Motion carried.

Hedge stated that if the Council felt that the Councilor Districts should be more compact, and such change would necessitate a change in the Constitution and By-Laws, and should be referred to the Constitution and By-Laws Committee.

The Journal Committee met on August 27, and discussed several changes, new headings, etc., as

started in the July issue of the Journal. Some ads are being dropped and others added. The pages of pictures appearing in the August issue illustrate graphically the new stock.

The request that the state study the need for a bill to control alcoholism resulted in the appointment of a committee to investigate the need for such legislation. On the committee are A. J. Carlson, Ivy, Norbury, Cross, Neece, Stevenson. Other states where such legislation is in force are being contacted, and an investigation is being conducted.

Hedge called the attention of the Council to the article on antivivisection which appeared in the July 24th Saturday Evening Post.

Hutton reported as Chairman of the Committee on Medical Service and Public Relations. A meeting was held Sunday morning at the C.A.A., and various questions were considered. Dr. Frederick Slobe had requested society approval of a contemplated industrial radio program which should go on the air September of this year. The Chicago Medical Society Council will also be contacted for an expression of opinion. The radio program of the A.M.A. was also discussed, and the part Illinois is to play in this picture was considered. The office of the secretary should get in touch with W. W. Bauer about this work so that correct cooperation from this state can be given.

Hutton reported as Chairman of the Committee on Medical History, a meeting was held on June 1, then a sub committee got together on June 20 to discuss the proposed contribution from the pediatricians. Black, Hoyne, Hess, Richardson and Crawford of Rockford were present, and the field was divided. The committee feels it is on firmer ground, and that more definite progress is being made.

Otrich reported that he had been attending a meeting in Randolph County and when there, he had gone to view the grave of Dr. George Fisher, pioneer physician and first speaker of the House of Representatives of the State of Illinois. The grave lies nine miles from the Ruma-Murdock chat road, near St. Leo's Church on the highway right-of-way, and has been marked with a large bronze historical placque. However, changes in the road bed, erosion, etc., are destroying the cemetery lot where this physician is buried. Cement curbings should be poured, and something should be done as soon as possible in order to preserve what is left of this family plot.

MOTION: (Otrich-Hamilton) that the secretary write to the Governor and call the situation to his attention so that he can refer the matter to the proper department for action. Motion carried.

Hamilton discussed the proposed draft bill which would affect members of the medical profession. There is a definite need for 6,000 doctors by January 1, 1949, and if this number is not recruited voluntarily, the draft bill, already prepared, will be presented to the House and Senate. Of this group, Illinois should furnish between 500 and 800. Men who received their education at the expense of the government, members of the medical profession who entered this country as a "Displaced Person" have a financial and moral obligation to serve. Those of this group who have not seen military service should be requested to enlist for a term of one, two or three years.

Editorials should appear in the Illinois Medical Journal, a list of these men should be secured and distributed to the Councilors so that personal contact can be made. Universities with young men in research should be encouraged to release men eligible for military duty. The public relations program should be intensive along this line, and newspaper releases should be forthcoming. Public opinion will be the only actual means of encouraging enlistment of these men.

Leary suggested that the matter be handled on the basis of a "resolution passed by the Council", and that this might make a better appeal as a news release. The material was prepared and submitted for approval.

MOTION: (Otrich-English) that the resolution be approved. Motion carried.

Leary presented his portion of the report for the Committee on Medical Service and Public Relations, stating that the work for the committee on Rural Health had been very successful; the publicity sent out for the annual meeting of the society was well received, and good cooperation was received from the various speakers. Assistance has been given to the ophthalmologists, and a news release was prepared for distribution in the court room.

John W. Neal reported as executive secretary of the Committee on Medical Service and Public Relations stating that the activities of the committee would increase when the political campaigns got under way. Endorsement letters will be sent out in the near future.

Since there were no objections, the chairman ruled that the report of the committee be accepted and placed on file.

Blair reported as chairman of the Educational Committee stating that a meeting was held on June 21, and since that time, routine work has been progressing nicely. The industrial group headed by Slobe has requested that their broadcasts clear through the Educational Committee. Someone in authority has to sign for the release of the material; Dr. Hedge and Dr. Hopkins have taken care of this recently. This problem should be considered by the Council, and Miss Fox authorized to sign as secretary of the committee.

Miss Fox has been asked to join the Business and Professional Women's club and has been able to arrange programs on health since her membership was accepted.

Health Talk continues to be popular, and the card file of those who receive it is in constant revision so that no dead material goes out. There are many individual requests for certain issues of "Health Talk", and these requests have been filled.

The Society Exhibit was on display at the State Fair at Springfield with Miss Fox in attendance the first three days; after that time, the Woman's Auxiliary in Sangamon County took care of the booth. We would like to suggest that the secretary's office send a letter of appreciation for this work. Some 5,000 "Prepayment Pamphlets" and some 4,000 "Doctors and Horses" were distributed.

At this time, Miss Fox is assisting the Chicago Medical Society in their booth at the Cook County Fair, and some of her material, presented at the county level, is on display there.

The question of the sponsored radio program has been discussed several times, and still presents a problem. The industrial health program outlined by Dr. Slobe has been worked out under the supervision of a radio man, and should be well received.

The request of the industrial group that we listen to the first "take" on their releases for radio may cause some difficulty. The only two Chicago men on our committee are Dr. Hick and Dr. Furey. This request might be too heavy a load for these men to assume, and if such is the case, we would like to have Council permission to have the Chairman appoint two liaison men from Chicago to take over this responsibility and to listen to these programs if it is needed.

MOTION: (Hamilton-Coleman) that this request be granted. Motion carried.

Rhode Island, New Hampshire and New Jersey all have radio programs; Rhode Island offers their program to other states. In the past such work has been done without sponsors, but perhaps the coming programs will have commercial sponsors. A medical director for television has been brought from New York to Chicago for work to begin shortly, so the importance of this is obvious.

WLS plans a medical program, and has requested aid from the Illinois State Medical Society in working over a health chart presenting various fields of medicine that might be presented on the air.

The Chairman ruled, since there were no objections, that the report be accepted and placed on file.

Coleman reported that the I. P. A. C. work was progressing in a routine fashion and that a meeting had been held Saturday evening.

He also reported that following the contribution from the American Cancer Society to the National Health Council, sponsored by Ewing, he wrote to the national headquarters. They explained their action on the matter was based upon the fact that the A.M.A. was participating in the meeting and that Fishbein was one of the main speakers. The reply given was that naturally the A.M.A. must participate in order to protect members of the medical profession, but that the reaction in Illinois was definitely unfavorable to contributions being given by such organizations as the American Cancer Society, Red Cross, and the National Foundation.

Camp reported that a committee report had been received from Gerard N. Krost on the Committee on Fetus and Newborn, which he would have mimeographed and sent to all members of the Council with the minutes of this meeting.

Cross reported as Director of the Department of Public Health, and stated that he had developed forms for the application for state and federal funds under the Hill-Burton Bill for the construction of hospitals in Illinois. These can be prepared for publication in the Journal if such is the desire of the Council.

The Board of Public Welfare Commissioners has developed an Illinois planning Committee to meet to make plans for a conference to be held in Washington in March, in anticipation of the 1950 White House Conference on Children. The Illinois State Medical Society should have a representative at the 1950 meeting, and should also have a representative on the Planning Commission.

The State Department of Public Health had an excellent exhibit at the State Fair, located next to that of the I.S.M.S.

The question of the advisability of placing benzedrine inhalers under state control for sale by prescription only should be considered by the Council. Perhaps this action should be taken by the 66th General Assembly so that the distribution of benzedrine can be controlled.

MOTION: (English-Hamilton) that Dr. Roland R. Cross be appointed as the representative of the Illinois State Medical Society at the 1950 White House Conference. Motion carried.

MOTION: (Otrich-Norbury) that the problem presented by the distribution of benzedrine be referred to the Committee on Medical Service and Public Relations. Motion carried.

O'Neill as Councilor, reported on the hospital situation in Princeton, following receipt of a complaint which dealt primarily with the question of anesthesia in the hospital. After discussing the problem with most of the men working in the hospital, it was O'Neill's opinion that conditions compared very favorably with those existing in any small hospital with similar equipment. One physician has been specifically trained in anesthesiology, and returns for postgraduate work periodically. Various types of anesthesia are in use, and the nurses giving ether anesthesia have been trained for the work. There has been one maternal death in the past five years. The situation seems perfectly in order, and not one to cause any alarm.

Otrich reported as Chairman of the Committee on Nutrition. A meeting of the Farm Foundation was held on July 12 at the Union League Club of Chicago with representatives present from many various fields. Funds are available to this group "for the advancement of agriculture", and they plan to set up a program for future work. Nutrition and its relation to the soil is their main aim, and the education of the medical profession, the farm group, etc., is contemplated. The next meeting of the Illinois State Medical Society should have a speaker

before the general assembly on this subject, and the medical profession should be better informed along all these lines.

MOTION: (Hamilton-Hawkinson) that W. C. Bornemeier be appointed as Vice-Chairman of the Committee on Arrangements for the 1949 annual meeting of the I.S.M.S. Motion carried.

MOTION: (Hamilton-Stevenson) that the Chairman of the Council appoint a representative of the Illinois State Medical Society to the Illinois Planning Commission as requested by Dr. Cross. (Next meeting to be held September 8.) Motion carried.

The International Travel Service has requested that the Illinois State Medical Society sponsor a special train to the A.M.A. meeting in Atlantic City in June, 1949.

MOTION: (Hamilton-Hawkinson) that the matter be referred to the Chicago Medical Society. Motion carried.

At the request of Benjamin Wham, Chairman of the Public Health Committee, the Chairman of the Council made the following appointments:

Dr. Arkell M. Vaughn, to attend the meeting at the Stevens Hotel, Chicago, 1:00 p.m., September 17.

Dr. Charles O. Lane, to attend the meeting in Mt. Vernon, Hotel Emmerson, 10:00 a.m., September 24.

MOTION: (Hamilton-Saunders) that the Chairman of the Council name a physician to act as a member of the state committee being formed by the Illinois Epilepsy League, Inc. Motion carried.

MOTION: (Hamilton-Stone) that the Council approve the action of the secretary in purchasing additional files for the Carl E. Black-Illinois State Medical Society Collection at the State Historical Library, and that future actions of this nature be approved. Motion carried.

MOTION: (Stevenson-Hughes) that the following members be elected to Emeritus Membership: H. N. Rafferty, Robinson, Crawford Co.; G. S. Botts, R. F. D., Canton, Fulton Co., C. H. Hamilton, Canton, Fulton Co.; E. G. Fuller, Gardner, Will-Grundy Co.; Horace Dunn, Spring Valley, Bureau Co.; Egbert Fell, Rockford, Winnebago Co.; Rollin Rice, Savanna, Carroll Co.; S. Frank Russell, Macomb, McDonough Co.; John W. Montgomery, Birds, Lawrence Co. Motion carried.

MOTION: (Stevenson-Vaughn) That the following members be elected to Past Service Membership: C. J. Poole, Mt. Vernon, Jefferson-Hamilton; Robert R. Smith, Mt.Vernon, Jefferson-Hamilton; George Knappenberger, Macomb, McDonough; Ernest F. Lidge, Mundelein, C.M.S.; Arthur M. Butzow, 4205 N. Mozart St., C.M.S.; O. E. Fink, Danville, Vermilion; T. J. Carmody, Danville, Vermilion; M. D. Henderson, Franklin, Morgan; Benson M. Jewell, Danville, Vermilion; W. C. Mershimer, Shawneetown, Gallatin. Motion carried.

MOTION: (Stevenson-Otrich) that the bills as audited by the finance committee be approved. Motion carried.

The Council adjourned at 12:45.

HAROLD M. CAMP, M.D.
Secretary

THE GENERAL PRACTITIONER

Before any physician can be a competent specialist he should be a good doctor, and should be well acquainted with all of the diseases of the human body. It, therefore, might be well to urge that the specialty boards require that each applicant have at least three years' experience in general practice before specializing, and that hospitals reserve a major portion of their resident training positions for men with such experience. The specialty training program then could be lessened, because out of his own experiences the physician would have acquired unusual training that especially fitted him for any type of medical practice.

The general practitioner is a vital part of our system of medical care. He should not be denied the proper use of available hospital facilities. There are certain intricate procedures that must be limited to specialists in that field, and the competent general practitioner will recognize his limitations. Our present system of medical care is very complicated, and no one can cover the whole field. The specialist and the general practitioner are equally necessary.—Cleon A. Nafe, M. D., in J. Indiana St. Med Assn.

NEWS OF THE STATE

ADAMS

Physician Honored.—Dr. W. E Davidson, who has practiced in Liberty for forty-seven years, was publicly euglogized Labor Day when the community held a basket dinner in his honor. Dr. Davidson graduated at Keokuk College of Physicians and Surgeons at Keokuk, Iowa, in 1901.

BUREAU

Blessing of Hospital Launches New Drive.—The new million dollar wing of St. Margaret's Hospital in Spring Valley was blessed with appropriate ceremonies August 28. The occasion marked the formal opening of a new campaign to raise $375,000 to complete the building and to obtain additional furnishings. Dr. George E. Kirby, Spring Valley, has been chosen chairman of the new campaign. In a statement to the press Dr. Kirby said "Our families, the city of Spring Valley, the rural territory immediately adjoining, outlying villages and towns and even some of the larger cities in the general area will benefit from this great modern institution, equipped to deliver just about every possible kind of health service. The Sisters of St. Mary of the Presentation who have operated St. Margaret's Hospital since its founding in 1903 should be commended for so bravely undertaking this expansion program."

CHAMPAIGN

Personal.—Additions to the staff of Carle Hospital include Doctors Lowell L. Henderson, Carleton Allen Keck and Frederick K. Sargent. Dr. Henderson, has been named head of the department of allergy, Dr. Keck, a member of the eye, ear, nose and throat staff, and Dr. Sargent has been named to the pediatric staff.

COOK

Dr. Huggins Awarded Fenwick Prize.— Dr. Charles Huggins, professor of urology at the University of Chicago School of Medicine, has been awarded the Fenwick Prize, a gold medal, by the Societe Internationale D'Urologie for work on the endocrine control of cancer of the prostate.

Research in Biochemistry.—The University of Illinois College of Medicine has received $7,000 from Mead Johnson and Company, Evansville, Ind., to support a two year fellowship in research in biochemistry in the department of pediatrics, under the supervision of Dr. Henry G. Poncher, head of the department.

New Head of Radiobiology Institute.—Thorfin R. Hogness, Ph.D., has been appointed director of the institute of Radiobiology and Biophysics at the University of Chicago. He succeeds Raymond E. Zirkle, Ph.D., who has become professor of radiobiology.

Dr. Westlake Honored.—Harold Westlake, Ph.D., Winnetka, associate professor of speech re-education, Northwestern University, has been awarded a scholarship for specialized training in cerebral palsy by the National Society for Crippled Children and Adults, Inc., Chicago. Dr. Westlake is one of the first in the new national program established to meet the challenge of a crippling condition that disables some half-million Americans, the society announced.

Public Health Meeting.—Featuring two one-day sessions of discussions by outstanding authorities in the fields of public health and education, the sixth annual conference of the Illinois Statewide Public Health Committee was held at the Stevens Hotel in Chicago, September 17, and at Hotel Emmerson in

Mt. Vernon, September 24. Benjamin Wham, Chicago, and Mrs. Walter Stevenson, Quincy, are co-chairmen of the committee.

The purpose of these meetings is to provide information regarding the services of county health departments. Definite health education and campaign procedures were outlined for Illinois counties expecting to vote on the establishment of such a department in the November election.

Highlighting the program in Chicago was an address by Hugh Masters, educational director of the W. K. Kellogg Foundation, Battle Creek, Michigan. Mr. Masters spoke on the subject "Local Public Health Service and a Voluntary Health Agency." Dr. Arkell Vaughn, Chicago, Councilor of the Illinois State Medical Society, represented the society at the meeting.

Among the outstanding speakers at the Mt. Vernon meeting was Dr. W. W. Bauer, director of the bureau of health education of the American Medical Association, Chicago. Dr. Bauer is a national authority in the field of health education.

It was announced that the entire program of both the northern and southern sections of the conference is in line with the objective of the Statewide Public Health Committee "to promote adequate public health services for every area of the State." This committee has in its membership more than 5,000 "health-minded" citizens of Illinois.

Grants for Research.—Seven research grants totaling $32,154 have been awarded the University of Illinois college of medicine in recent weeks, Dr. A. C. Ivy, vice-president, has reported.

The Office of the Surgical General, Department of the Army, has awarded a $10,000 grant for the "Pharmacodynamic Study of Renal Blood Flow." This investigation will be conducted by the department of pharmacology, under the supervision of Dr. Jules H. Last.

The U. S. Public Health Service has awarded the college of medicine separate grants of $6,000 and $5,500 for visual education depicting clinical manifestations of uterine carcinoma to be undertaken under the supervision of Dr. Frederick H. Falls in the department of obstetrics and gynecology, and for a study of the physiological effects of the influenza virus on the mammalian host to be conducted under the supervision of Dr. J. E. Kempf in the department of bacteriology.

Parke, Davis and Company has made a $5,000 grant for the development and evaluation of antihistamine and adrenergic blocking agents. The study will be conducted under the supervision of Dr. E. R. Loew in the department of pharmacology.

Ayerst, McKenna and Harrison, Ltd., has awarded a $3,960 grant for a research project on "Urogastrone" to be conducted by the department of clinical science under the supervision of Dr. M. I. Grossman.

Other research grants have been received from the American Pharmaceutical Association and the Upjohn Company.

Dr. Knisely Awarded Alvarenga Prize.—In recognition of his studies on "Sludged Blood" the College of Physicians of Philadelphia on July 14 awarded the Alvarenga Prize for 1948 to Melvin H. Knisely, Ph.D., former associate professor of anatomy, University of Chicago School of Medicine. The Alvarenga Prize was established by the will of Pedro Francisco da Costa Alvarenga of Lisbon, Portugal, an associate fellow of the College of Physicians of Philadelphia. The college invites the recipient to deliver the Alvarenga Lecture. Dr. Knisely became head of the department of anatomy at the Medical College of the State of South Carolina, Charleston, July 1.

Dr. Kleinschmidt Named to New Post.—Dr. Earl Kleinschmidt, Oak Park, became Oak Park's health commissioner on September 1. Dr. Kleinschmidt succeeds Dr. Gilbert P. Pond, resigned, who held the position for some four years.

New Committee to Project Health Promotions.—Plans for a determined drive to put into effect the recommendations of the Chicago-Cook County Health Survey, completed last year, will be the duty of a committee now being formed under sponsorship of the Health Division of the Council of Social Agencies of Chicago.

Chairman of the committee, already selected, is Samuel A. Goldsmith, director of the Jewish Charities, now in Europe surveying relief operations. Other members will be announced later, according to Miss Mary E. Murphy, director of the Elizabeth McCormick Memorial Fund and chairman of the Health Division.

The division is now making a study to determine how many recommendations of the Survey have already been adopted by the numerous governments and other agencies of the county. When that is complete, the most important remaining elements, such as the expansion and financing of health departments, will be outlined for an intensive campaign throughout the county.

The Survey, first step in the postwar rehabilitation effort of Chicago's health agencies, was made by the United States Public Health Service, at the request of Edward J. Kelly, then mayor, and Clayton F. Smith, then president of the County Board. They acted at the suggestion of a committee representing the Council of Social Agencies, the Chicago Medical Society and the Institute of Medicine of Chicago.

The United States Public Health Service organized a team of some two-score experts in various phases of health activity, which spent six months in the work. Their reports, 41 in all, containing more than 450,000 words, evaluated the good and bad of the health facilities of the community and made detailed and practical recommendations for improving them, where needed.

The Survey as a complete "audit" of the health protection of a great metropolitan area, is considered a milestone in the history of public health.

No other community has ever undertaken so tremendous a task. Chicago's feat is already serving as a model or stimulus to other cities.

The text, which will be nearly 1,200 pages long, plus numerous charts, maps, tables and pictures, will shortly be published by the Columbia University Press. Meanwhile, a condensed, non-technical, low-cost version in pocket-size about 100 pages long, called "Blueprint for a Healthy Community," has been printed for general use, and is available at the United States Public Health Service office, 610 South Canal Street.

Major emphasis in the coming campaign is expected to be placed on the expansion of the Chicago Health Department and the Cook County Department of Public Health.

Faculty Appointments at Illinois.—Appointment of eight physicians to positions of professorial rank on the faculty of the University of Illinois College of Medicine has been announced by Dean John B. Youmans.

Dr. S. Howard Armstrong, Jr., has been appointed professor of medicine. A graduate of Princeton University and Harvard medical school, Dr. Armstrong now serves as chairman of the department of medicine at Presbyterian hospital.

Drs. William S. Hoffman and Robert E. Johnson have been named professorial lecturers in physiology. Dr. Hoffman, who has achieved an excellent reputation in certain fields of biochemistry, medicine, and physiology, serves as director of biochemistry at Cook County Hospital Laboratories and Hektoen Institute for Medical Research.

Dr. Johnson holds the position of director of research at the Medical Nutrition Laboratory. His research activities have involved studies in the fields of nutrition, exercise physiology, and industrial physiology.

Drs. Samuel A. Leader and Harry Slobodin have been appointed to the faculty with the rank of clinical assistant professor of radiology. Dr. Leader, a graduate of the University of Chicago and Rush Medical College, is chief of diagnostic x-ray at Vaughn unit, Hines. Dr. Slobodin, a graduate of Columbia University and New York University medical school, has served as chief of the department of radiology at the Veterans hospital since 1942.

Dr. Rudolph Novick has been appointed clinical assistant professor of psychiatry. Dr. Novick has achieved recognition as director of the Illinois Society for Mental Hygiene.

Dr. Joseph E. Bourque who has gained research experience in the fields of gastric motility, gastric secretion, shock, and nutrition, has been appointed an assistant professor of physiology. He previously taught at the University of New Hampshire, Cornell University, Loyola University of New Orleans, La., and Wayne University.

Dr. James A. Campbell has received an appointment as assistant professor of medicine. A graduate of Knox college and Harvard medical school, he now serves as assistant attending physician at Presbyterian hospital.

Progress in Building Plans for Medical Center.—More than $50,000,000 for building construction to take place within the next five years is now in the blueprint stages for the Medical Center District on Chicago's near West Side.

Planned construction will bring the Medical Center District one step nearer to the ultimate goal of $300,000,000 valuation which has been predicted for it by Dr. Walter H. Theobald, president of the Medical Center Commission.

The present value of land, buildings, equipment, and facilities in the Medical Center District is now estimated at nearly $100,000,000. It is the largest in the world in terms of money invested in educational and hospital facilities. The 300-acre district is bounded by Congress street, Oakley Blvd., Roosevelt road, and Ashland Blvd.

Building projects on the drawing board include the $15,000,000 Veterans Administration hospital. Ground will be broken sometime in 1949 for the 1,000-bed hospital which will be located in an area bounded by Taylor street, Damen avenue, Polk street, and Ogden avenue. Selection of that site near three medical schools and affiliated institutions will enable the hospital to secure an outstanding staff and to extend to patients the best in medical care.

Another large project will involve improvements and expansion of physical facilities of the Cook County Hospital group. Cook County voters passed a $7,000,000 bond issue last spring for a program which will include the construction of a new residence for interns and extensive modernization of the present buildings.

Construction of the state's new $6,000,000 tuberculosis hospital also will be started next year. The 500-bed institution will be located in the 10-acre block bounded by Taylor street, Damen avenue, Roosevelt road, and Wolcott street.

The most immediate construction project which will be undertaken in the District will be the breaking of ground this fall for the Institution of Tuberculosis Research on Polk street, near Wood. The $361,000 Institution will produce and distribute the vaccine, BCG, which has proved to be highly effective in preventing tuberculosis in children as well as adults. It will be operated jointly by representatives of the University of Illinois, the Research Foundation, and the Municipal Tuberculosis Sanitarium.

Loyola University will spend $5,750,000 for erection of a building to house its School of Dentistry and the Stritch School of Medicine. The school building will face Harrison street, from Damen avenue to Hoyne avenue. The University is now conducting a $12,000,000 fund campaign, one-fourth of which is being sought this year.

Other institutions in the Medical Center District which are planning construction within the next

five years are Presbyterian hospital, the Chicago Medical Society, the Cook County Graduate School of Medicine, and the West Side Professional Schools YMCA.

In addition, the University of Illinois is preparing recommendations for its building program to submit to the state legislature. The University building committee is now considering an $18,700,000 construction program which would include an addition to the 428-bed research and educational hospitals, a classroom and laboratory unit addition to the Colleges of Medicine, Dentistry, and Pharmacy, and a nurses' residence and school. Private financing is being sought for a student residence.

Several plans also are under consideration by insurance firms, large-scale builders, and others for the construction of modern, 10-story apartment buildings to be located in the District.

Society News.—Dr. Meyer A. Perlstein held clinics at the annual convention of the California Society for Crippled Children in San Francisco, September 23-26. On October 19, he addressed the Marquette-Alger Medical Society in Marquette, Mich., on "Differential Diagnosis of Convulsions in Children."—Dr. Philip Thorek presented a paper on "Vagotomy and the Ulcer Problem" with colored motion picture demonstration before the Ninth Harlow Brooks Memorial Navajo Clinical Conference, Ganado, Ariz., August 30.—Dr. Max Thorek addressed the Wyoming Surgical Section of the United States Chapter, International College of Surgeons, at Laramie, Wyoming, August 31, on "Hirschsprung's Disease."

Personal.—Dr. John T. Reynolds, clinical assistant professor of surgery, University of Illinois College of Medicine, is spending three months abroad in graduate study.—Dr. Stewart H. Walpole opened offices in the same suite with Dr. C. H. Kramer at 125 West Chicago Avenue, Palatine, recently. He will confine his practice to general surgery.

DE KALB

DeKalb County Opens Child Welfare Unit.—The first child welfare unit in northern Illinois was recently established in DeKalb county and now is a going concern. Funds had been appropriated for the project by the county board of supervisors at their June meeting. Temporary quarters were established in the DeKalb township relief office of Thomas Olsen. In charge is Miss Mary Andrews, Sterling, who was provided by the division of child welfare, Illinois Department of Public Welfare. Miss Andrews has her master's degree in social work from Washington University, St. Louis, and previously was in charge of the unit in Jackson county.

Such a joint state-county project has been operating in southern Illinois for several years. The purpose of the unit is to provide services for children and referrals come chiefly from the county court, township supervisors, schools, public health nurses and the county departments of public assistance. Casework is provided for families undergoing difficultities with their children, for prevention of family break-ups and for effecting proper adjustments.

DOUGLAS

Personal.—Dr. Grant A. Jones, formerly of La Salle, has engaged in the practice of medicine in Arthur. Dr. Jones graduated at the University of Illinois College of Medicine in 1944 and served his internship at Grant Hospital, Chicago, where he had recently been a resident physician in pathology.

EDGAR

Dr. Jennings Retired.—Dr. J. Frank Jennings, Chrisman, recently retired from active practice. In his public announcement, Dr. Jennings said he wished to thank all the people for their many acts of kindness in his fifty-four years of service. He first started the practice of medicine in Scottland, Ill., moving to Chrisman in 1922.

FRANKLIN

New Member of Advisory Board.—Dr. R. C. Steck, Christopher, has been appointed a member of the advisory board of the Institute for Juvenile Research. The advisory board, with headquarters in Chicago, is made up of persons known to be interested in promoting the rehabilitation of children who are delinquent, mentally ill or defective or socially maladjusted.

Dr. Steck was formerly president of the Franklin County Medical Society, is vice-chairman of the Franklin County Cancer Society and the Franklin County division of the National Foundation for Infantile Paralysis and is a member of the Illinois Welfare association and the Illinois Rehabilitation association. He is a staff member of the Herrin Hospital.

KANE

Personal.—Dr. Vernon L. Evans has resigned as medical director of Mercyville Sanitarium to devote all of his time to the private practice of medicine in Aurora.

Society News.—Dr. Arkell M. Vaughn, Chicago, addressed the Aurora Medical Society, September 2, at the Sky Club, Leland Hotel Aurora, on "Vagotomy in the Treatment of Gastro-Intestinal Ulceration."

KANKAKEE

Physician Retires.—Dr. A. S. Eshbaugh, who was practiced in Kankakee for more than fifty years, retired from active service, September 1. Dr. Eshbaugh graduated at Hahnemann Medical College, Chicago, in 1886 and began practice in Lexington. He then moved to Chicago but went to Kankakee in 1897. The physician is eighty-nine years old.

LA SALLE

Memorial Planned for Physician.—A public meeting was held in Ottawa, August 25, to discuss

plans for a suitable memorial to perpetuate the memory of Dr. C. J. Stricker, a Marseilles physician who died recently. Among the suggestions were the establishment of a hospital for Marseilles; a chimes tower for Riverview cemetery; or a bronze honor roll bearing the names of all Marseilles men who served in World War II.

Personal.—Dr. Joseph L. Jernegan recently became associated with his father-in-law, Dr. G. K. Wilson, Streator.

MACON

Blue Cross Dinner.—On September 3, the Macon County Medical Society was the guest of the Illinois Hospital Service Corporation at a dinner in the St. Nicholas Hotel, Decatur. Dr. Frank P. Hammond, medical director of the Illinois Hospital Service Corporation discussed "Professional Interpretation of the Blue Cross Membership Certificate." Other speakers included Mr. C. N. Andrews, assistant director in charge of Hospital Relationships and Mr. E. P. Lichty, executive director.

Personal.—Dr. Robert R. Harriage moved to Aurora recently to engage in the practice of obstetrics and gynecology. He is transferring his membership to the Kane County Medical Society.

MACOUPIN

Society News.—The Macoupin and Montgomery County Medical Societies met jointly in Carlinville recently to hear Dr. O. P. J. Falk, associate professor of internal medicine, St. Louis University School of Medicine. Dr. Falk's subject was "Therapeutic Problems in Medical Practice."

MADISON

Hospital News.—A cornerstone for the new Wood River Township Hospital was recently laid with special ceremonies. Dr. Maurice Woll was chairman of the committee. Dr. L. D. Archer, president of the Wood River Township Medical Society, was among the speakers.

Society News.—"Behavior in Childhood" was the subject of a film shown before the Madison County Medical Society at its meeting at the Madison County Sanatorium, Edwardsville, September 2. The film was prepared by the American Academy of Pediatrics.

ST. CLAIR

Personal.—Dr. William F. Rose has resigned as head of the surgical service at Jefferson Barracks Veterans Hospital to go into private practice of medicine in Dupo. He will confine his practice to general surgery.

RANDOLPH

Randolph Health Unit Approved.—At a special meeting of the Randolph County Medical Society recently, unanimous approval of the proposed bi-county public health department was given and members of the society voted to cooperate in setting up the health organization. Dr. W. W. Fullerton, Steeleville, secretary of the society, in a statement to the press, said that the Monroe County Medical Society had previously disapproved the formation of a Monroe-Randolph Medical Health Department but it was understood that this agreement was temporary. Dr. Fullerton believes that since the Randolph County physicians have given their approval, similar action will be taken by the Monroe County group.

SANGAMON

Society News.—Dr. Louis R. Limarzi, Chicago, will address the Sangamon County Medical Society, November 4, on "Diagnosis and Treatment of Hematological Disorders." Dr. Charles B. Puestow, director of surgery, Hines Hospital, addressed the society September 2 on "Post-Operative Biliary Physiology."

Fifty Year Member.—Dr. Albert L. Stuttle, Williamsville, was presented with his pin and certificate of membership of the Fifty Year Club at the June 1948 meeting of the Sangamon County Medical Society. Following an introductory talk by Dr. James Day, member of the Fifty Year Club, and the presentation of the tokens of membership by Dr. Kenneth H. Schnepp, Doctor Stuttle addressed the society on "The Progress of Medical Practice in the Past Fifty Years."

GENERAL

Telephone Used in Graduate Work.—Dentists and physicians in Illinois and surrounding states were afforded an unusual opportunity this fall to attend an evening postgraduate course in Cancer Control and Oral Diagnosis through the transmission of the lectures by telephone to five Illinois cities.

The unique presentation originated at the University of Illinois college of dentistry, located in the Medical Center District on Chicago's West Side. The lectures were transmitted via telephone to groups of dentists and physicians who will convene in Belleville, Peoria, Rockford, Springfield, and Urbana. Urbana.

The course is being offered via telephone to give a greater number an opportunity to enroll. Facilities at the University of Illinois college of dentistry permit only 200 to attend personally the course which consists of six lectures.

The Illinois division of the American Cancer Society, the Illinois State Dental Society, and the Illinois State Medical Society cooperated with the University of Illinois in offering the first course which started October 6. The tuition charge for the course has been waived, through the courtesy of the Illinois division of the American Cancer Society.

Regional Meeting on Heart Disease.—The Illinois Heart Association, in co-operation with the Adams County Medical Society, will hold a symposium on heart disease in Quincy on November 4.

Speakers on the afternoon program, starting at two o'clock at the Lincoln-Douglas Hotel, include Dr. Arthur Graham Asher of Kansas City, who will discuss nutrition and its relation to cardiac diseases, and Dr. Thomas H. Burford of St. Louis, Associate Professor of Surgery, Washington University

School of Medicine, on "Surgery in Congenital Heart Disease." There will be case presentations by Dr. Gordon Perisho and Dr. Eric Massig, Radiologist and Pathologist at Blessing and St. Mary's Hospitals, Quincy, followed by a panel discussion with Dr. Warren F. Pearce of Quincy as Moderator. Dr. George V. LeRoy, assistant professor of medicine, Northwestern University Medical School, will address the dinner meeting in the evening on "Coronary Heart Disease."

All physicians are invited to attend the symposium. There is no registration fee. Dr. Edward W. Cannady of East St. Louis is Chairman of the Illinois Heart Association's Educational Committee, with Dr. Warren F. Pearce of Quincy in charge of local arrangements.

Dr. Kobes Gets New Appointment.—Dr. Herbert R. Kobes, director of the University of Illinois' Division of Services for Crippled Children, has been appointed to the advisory committee of the U. S. Children's Bureau.

The appointment has been tendered to Dr. Kobes by Katherine F. Lenroot, chief of the U. S. Children's Bureau in the Federal Security Agency. She has announced plans for the committee to meet at least once a year to advise the Children's Bureau on matters relating to the extension and improvement of health services for mothers and children.

The committee is composed of individuals representing professional and citizen's groups and others selected by the Children's Bureau on the basis of their knowledge and interest in health services for mothers and children.

Promotions in Department of Welfare.—Dr. Paul E. Feldman, psychiatrist on the Manteno State Hospital staff, has been appointed assistant superintendent of Alton State Hospital, according to Cassius Poust, director of Illinois Department of Public Welfare.

Director Poust also announced that Dr. Joseph Albaum, staff physician at the Lincoln State School and Colony, has been promoted to the position of assistant superintendent there.

Dr. Feldman became a junior physician at Manteno in 1937 and in 1941, spent a year of study at the Institute for Juvenile Research in Chicago as a Fellow in psychiatry. He served as a psychiatrist in the Army in World War II and, following his release in the grade of captain, returned to State service at Manteno.

Dr. Albaum went to Lincoln in 1938 as a junior physician, served as an Army medical corps captain for four years and following release, returned to his staff duties at Lincoln.

Statistical Summary for July 31, 1948.—The population present in all institutions of the State Department of Public Welfare July 31, 1948 was 46,496, an increase of 1,499 over July 31, 1947. On the books of all institutions including those present, in family care, paroled, escaped and all other absences were 53,431.

The greatest increase over July of last year was in the nine hospitals for mentally ill, the population of which rose 1,439. There were 1,221 admissions as compared to 1,028 in July, 1947. There were 745 discharges and 265 deaths during the month. In these hospitals there were 34,221 patients and a total of 37,447 on the books.

The institutions for mental defectives — Dixon State Hospital and Lincoln State School and Colony showed an increase of 218 over the previous year. The population present was 9,170 with 10,605 on the books.

There were 374 in Security Hospital, a decrease of 2 as compared to one year ago.

At Neuropsychiatric Institute, where most admissions are temporary for special treatment 65 patients were present July 31, 1948.

Clinics for trachoma control and prevention of blindness, in southern Illinois, provide treatment for trachoma, glaucoma and other eye diseases. During July, 236 received treatment for trachoma, 49 for glaucoma and 398 for other eye ailments. Twelve were hospitalized for operations.

The Chicago Community Clinic reported 608 interviews for the month. Five hundred and eighty-one were formerly patients in state hospitals, 257 at Elgin and 211 at Manteno.

The Eye and Ear Infirmary dispensary listed 18,401 treatments in July, and 401 persons were admitted to the hospital.

The Welfare Institutions reported 1,327 new cases and 5,496 old dental cases for July.

HEALTH DEPARTMENT ACTIVITIES

Dr. Herbolsheimer Given New Post.—Effective June 1, Dr. Henrietta Herbolsheimer has been appointed medical administrative assistant to Dr. Roland R. Cross, Illinois director of public health. She succeeds Dr. Leslie W. Knott who is now at work with the American Mission for aid to Greece at Athens. Mr. George K. Hendrix has been appointed chief of the division of Hospital Construction and Services, succeeding Dr. Herbolsheimer in that capacity.

Public Health Methods.—Frank C. Bauer has been appointed chief of the newly organized Public Health Methods Division of the Chicago Health Department which will collect and analyze Chicago Health Department birth, death, and disease statistics. Mr. Bauer was chief of the Import Statistics Section of the Bureau of Census in Washington from 1942-1947. Previously, he did statistical work for the Alien Registration Division of the Department of Justice and the Public Health Service.

Personal.—Dr. Max Igloe has been appointed in charge of the new district health center located at 800 South Paulina Street of the Chicago Department of Health.

Dr. Rawlings Named Chief of Maternal and Child Health.—Dr. Donaldson F. Rawlings has been appointed Chief of the Division of Maternal and Child Health of the Illinois Department of Public Health, effective July 6. He succeeds Dr. Ruth E. Dunham who resigned to accept a commission in the U. S. Public Health Service.

A native of Illinois, Dr. Rawlings graduated from the University of Chicago in 1936 and received his medical degree from Northwestern University Medical School in 1941. He also holds a master's degree in public health from Johns Hopkins University in Baltimore, Maryland.

With the exception of two years spent in the Medical Corps of the U. S. Naval Reserve, Dr. Rawlings has been employed continuously in public health work in Illinois since 1942. He served as Health Superintendent in District No. 4, with offices in Galesburg, and as Health Officer for the Lawrence County Defense Zone Health Department and for the Alexander-Pulaski Bi-County Health Department. At the time of his recent appointment Dr. Rawlings was serving as Assistant Chief of the Division of Local Health Administration of the State Department of Public Health.

Annual Report for Cook County.—A well illustrated booklet incorporates the activities of the Cook County Department of Public Health for the year 1947. The report states that in suburban Cook County there were no cases of smallpox and only one case of diphtheria. Whooping cough cases declined from 531 in 1946 to 461 in 1947; and typhoid fever cases from 7 in 1946 to 5 in 1947. No major epidemics occurred in Cook County. Isolation, quarantine and increasing emphasis on immunization of all infants are among the significant reasons for this reduction. Epidemiologic investigation and nursing and medical service was given to 2,476 communicable disease cases. Every case of an animal bite was investigated to determine the condition of the animal and whether the person bitten was under medical care. Of the 432 animal bites reported 49 animals were found to be rabid.

Recognizing that tuberculosis is the leading cause of death for people between the ages of 15 and 44, the Department carried on a concerted case finding program. During 1947, 351 cases were reported and 5,962 children were tuberculin tested.

During 1947, for the first time since the establishment of the County Health Department, no deaths occurred from infantile paralysis. There were 81 cases reported, however.

One of the most significant activities of the department is the life-saving work with premature infants. In Cook County about 5 per cent of the babies born alive are premature. A 24 hour service to save the lives of these infants has been inaugurated in cooperation with other agencies. The service is available to suburban hospitals and physicians by calling the County Sheriff's Police.

The report discusses the expanded services designed to improve the school health program, based on the Illinois Health and Physical Education Law. Nursing services were provided to 204 schools having an enrollment of 37,035. Physical examinations were completed on 9,195 elementary and high school students by health department physicians, cooperating pediatricians and local physicians.

The summary of activities of the Cook County Department of Public Health concludes with discussions on sanitary engineering and family health service, laying special emphasis on the administrative activities of the department.

The objectives of the Cook County Department of Public Health may be summed up in its slogan: Prevention Our Watchword; Cooperation Our Theme and Healthful Living Our Goal. William N. Erickson is president of the Board of Health of Cook County and Dr. Edward A. Piszczek, director of the department.

MARRIAGES

Dr. Richard J. Graff, Peoria State hospital superintendent, to Miss Myra White, Danville, on July 10, 1948.

DEATHS

ARTHUR MAX ASZMANN, East St. Louis, who graduated at The Hahnemann Medical College and Hospital in 1910, died suddenly of a heart attack, August 4, aged 62. He was a past president of the St. Clair County Medical Society.

EDWARD PAUL EMERSON, retired, Astoria, who graduated at Barnes Medical College, St. Louis, in 1898, died in St. Francis Hospital, Macomb, August 22, aged 65.

GEORGE JACOB HINN, Highland Park, who graduated at Illinois Medical College in 1904, died in St. Francis Hospital, Evanston, August 8, aged 75.

IRWIN WILSON HOWARD, Aurora, who graduated at Ohio Medical University, Columbus, in 1910, died August 1, aged 70.

PHILIP DANIEL MCGINNIS, Joliet, who graduated at Rush Medical College in 1900, died April 18, aged 72, of uremia. He was past president of the Will Grundy County Medical Society.

JOHN EDWARD MCGUIGGAN, Chicago, who graduated at Chicago College of Medicine and Surgery in 1915, died May 30, aged 56, of coronary thrombosis.

JOHN EARLE MELOY, Peoria, who graduated at the University of Illinois College of Medicine in 1900, died in Grand Rapids, Minn., August 4, aged 77.

ROBERT BRUCE PREBLE, Chicago, who graduated at Northwestern University Medical School in 1891, died in St. Luke's Hospital, July 26, aged 82, of myocardial infarction, diabetes and third degree burns. He was professor of medicine at Northwestern University Medical School and was past president of the Chicago Medical Society and the Chicago

Heart Association. In April 1917 he was commissioned a major in the medical reserve corps; he served as chief of the hospital center at Mars Sur Alliers, France, and on Jan. 31, 1919, was discharged with the rank of lieutenant colonel.

FRANCES A. RING, retired, Chicago, who graduated at Harvey Medical College, Chicago, in 1903, died August 20, aged 86. For several years she was physician in charge of the girls' department in the Juvenile Court.

CARL GUSTAF RYDIN, Chicago, who graduated at the University of Illinois College of Medicine in 1902, died July 30, aged 74.

ABRAHAM W. SCHRAM, Chicago, who graduated at Rush Medical College in 1896, died July 31, aged 73. He was a member of the American Association for the Study of Internal Secretions, and had practiced medicine in Chicago for 52 years.

RICHARD WADE TAYLOR, Villa Grove, who graduated at Chicago College of Medicine and Surgery in 1914, died August 20, aged 69. He was coroner for Douglas County.

DR. OLLIE HERBERT TREADWAY, retired, Pittsfield, formerly of Virden, who graduated at University of Missouri School of Medicine in 1893, died July 14, aged 87.

WILLIAM OSGOOD TUCK, retired, Plymouth, who graduated at Northwestern University Medical School in 1891, died August 21, aged 82. He had practiced medicine at Plymouth for more than 50 years.

FREDERICK H. YATES, retired, Decatur, who graduated at Barnes Medical College, St. Louis, in 1907, died August 19, aged 65. He had practiced medicine in St. Elmo until 1919 when he moved to Decatur.

GEORGE GUIDO ZOHRLAUT, Chicago, who graduated at the College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1902, died June 9, aged 69, of carcinoma of the bladder.

"FOR THE COMMON GOOD"

Public relations at work might well be the keynote of a compliment for the Woman's Auxiliary of the Sangamon County Medical Society during the State Fair in Springfield, August 13-22. In rotating teams, the Auxiliary staffed the Exhibit of the Illinois State Medical Society, answered numerous and varied questions and distributed thousands of copies of Health Talk, the Doctor and His Medical Society, the Illinois Prepayment Medical and Surgical Plan and Doctors and Horses.

Evidence that this type of activity is educational and of great interest to the Auxiliary members is reflected by individual women who had already worked one shift and requested that they be given another opportunity to return to the Booth.

In the words of Mrs. Walter Shriner, President of the Sangamon Auxiliary, this was a true opportunity to gauge the public's individual reactions and to set up a yardstick to determine the need for exploring new educational services. Mrs. Shriner believes that this one activity has resulted in more knowledge as well as enthusiasm on the part of her auxiliary.

Assisting Mrs. Shriner in staffing the exhibit were Mrs. Franz Fleischli, in charge of special projects for the auxiliary, Mrs. C. R. Dirskell, Mrs. E. L. McClay, Mrs. Floyd Barringer, Mrs. Robert Goodwin, Mrs. David McCarthy, Mrs. C. B. Stuart, Mrs. Henry Berchtold, Mrs. William Curtis, Mrs. H. H. Southwick, Mrs. S. R. Magill, Mrs. C. A. Ranker, Mrs. Richard Allyn, Mrs. Corwin Mayes, Mrs. A. T. Kwedar, Mrs. J. Hayden Shamel, Mrs. Paul LaFata.

Visitors at the Exhibit of the Illinois State Medical Society included, among many physicians of the Sangamon County Medical Society, Mr. Tom Hendricks, Secretary of the Council on Medical Service, AMA, and Mr. Lawrence Rember, director of Public Relations, AMA. In the Newsletter of the Council on Medical Service, Mr. Hendricks cited the query of the auxiliary member to Governor Warren of California: "I am the wife of a Springfield physician and would like to know your stand on socialized medicine." The governor replied that he was for prepayment medical care.

The cooperation of the Woman's auxiliary of the Sangamon County Medical Society is public relations as it should be practiced. They gave of themselves to the thousands of persons who visited the booth and told the story of the educational services available through the Illinois State Medical Society and maintained by the individual physician.

The Auxiliary is accorded the warm thanks of the Illinois State Medical Society for this excellent public relations effort. Acknowledgement also goes to Mr. Conrad Becker, Business Administrator of the Illinois State Fair. His courtesy in making available special passes to members of the Auxiliary is greatly appreciated.

To Dr. Roland R. Cross, state director of health, and members of his staff, the Society extends its

thanks. The space for the Exhibit, made available for the second consecutive year, was through the courtesy of the Illinois Department of Public Health. Special acknowledgement is given to Mrs. Margaret B. Cowdin, director, Bureau of Health Education, Mr. David V. Dahl, Exhibits Technician, and Mr. Forrest Nelson, assistant to Mrs. Cowdin. Their assistance is further proof of the close cooperation between the Illinois State Medical Society and the Illinois Department of Public Health.

Lectures Arranged Through the Educational Committee of the Illinois State Medical Society: Charles P. Blair, Monmouth, Chairman:

Harry Leichenger, Chicago, Mothers Club of the Washington Boulevard Methodist Church in Oak Park, September 21, Prevention of Childhood Diseases.

Carroll Birch, Chicago, Fullerton Business and Professional Woman's Club, in Chicago, October 13, Skin Deep — or Deeper. This is the inaugural lecture in a series of eight sponsored by this newly organized group.

Adrian D. M. Kraus, Chicago, Fort Dearborn PTA in Chicago, October 13, How the Parents of the School Can Make Our Health Program More Effective by Encouraging Protection through Immunization.

Franklin Fitch, Chicago, John Mills PTA, October 15, in Chicago, Problems of Sex Education. tion.

Mr. John W. Neal, Chicago, Lions Club in Chicago, October 27, on Socialized Medicine: Threshold of the Welfare State.

Beulah C. Bosselman, Chicago, Public Health Chairman of the Illinois Federation of Women's Clubs, November 8, in Chicago, Mental Hygiene as Applied to Everyday Living.

Lectures Arranged Through the Scientific Service Committee of the Illinois State Medical Society; Robert S. Berghoff, Chicago, Chairman:

John Soukup, Chicago, Henry County Medical Society in Kewanee, September 9, on The Pelvis in Obstetrics.

Norman L. Baker, Springfield, Greene County Medical Society in White Hall, September 10, Treatment of Fungus Infections of the Skin, illustrated.

B. C. Kilbourne, Chicago, Fulton County Medical Society in Canton, September 17, on Fractures of the Hand.

Harry M. Hedge and Harry A. Oberhelman, both of Chicago, Iowa and Illinois Central District Medical Association, in Rock Island, September 22, on "Cosmetics — Use and Abuse and Pediatric Surgery, respectively.

Archibald Hoyne, Chicago, Will-Grund County Medical Society, in Joliet, September 23, Diagnosis by Observation, illustrated.

Samuel Perlow, Chicago, Will-Grundy County Medical Society, in Joliet, October 14, on Varicose Veins, illustrated.

William H. Marlowe, Chicago, La Salle County Medical Society, in La Salle, October 14, Surgical Emergencies in Gallbladder Disease.

Alfred D. Biggs, Chicago, Effingham County Medical Society in Effingham, October 21, Respiratory Infections in Infancy and Childhood.

Thomas J. Coogan, Chicago, Logan County Medical Society in Lincoln, October 21, Diagnosis and Treatment of Coronary Thrombosis.

Herbert Rattner, Chicago, Will-Grundy County Medical Society in Joliet, October 28, on Common Diseases of the Skin, illustrated.

Edward L. Compere, Chicago, La Salle County Medical Society in La Salle, November 11, Differential Diagnosis and Treatment of Low Back Pain.

George V. LeRoy, Chicago, Kankakee County Medical Society, in Kankakee, November 12, on Current Views on the Treatment of Leukemias.

James T. Jenkins, Peoria, Logan County Medical Society in Lincoln, November 18, Anorectal Pathology, kodachromes.

William B. Serbin, Chicago, Effingham County Medical Society, in Effingham, November 18, Indications for and Methods of Induction of Labor.

James H. Hutton, Chicago, DeKalb County Medical Society in Sycamore, November 23, Hypertension: Its Diagnosis and Treatment from an Endocrine Standpoint.

Herbert E. Schmitz, Chicago, McDonough County Medical Society in Macomb, November 26, Menstrual Irregularities and Abnormalities with Special Attention to their Occurrence in Younger Women.

Give —

give enough

Through your

COMMUNITY CHEST

y Medi-
ractures

rhelman,
ral Dis-
Septem-
use and

County
Diagnosis

County
Varicose

County
Surgical

County
21, Res-
ood.
County
Diagnosis

County
Common

County
11, Dif-
ow Back

County
r 12, on
ukemias.
ty Medi-
norectal

County
mber 18,
ction of

County
23, Hy-
nt from

Donough
mber 26,
ies with
Younger

Journal